



## DOCTOR OF BUSINESS (DBA)

**The college experience and the impact on student retention**

**A study in the Institute of Technology, Sligo.**

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**The college experience and the impact on student retention:  
A study in the Institute of Technology, Sligo.**

**Michael John Barrett**

**A thesis submitted for the degree of  
Doctor of Business Administration (Higher Education Management)**

**University of Bath  
School of Management**

**October 2015**

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## ABBREVIATIONS

AUSSE	Australian Survey of Student Engagement
BERA	British Education Research Association
CAO	Central Applications Office
CUA	Connaught Ulster Alliance
DBA	Doctor of Business Administration
ECCE	Early Childhood Care and Education
EMEA	Europe Middle East and Africa
ESRI	Economic and Social Research Institute
FE	Further Education
FETAC	Further Education and Training Awards Council
GPA	Grade Point Average
HE	Higher Education
HEA	Higher Education Authority
I-E-O	Input – Environment - Outcome
IOTI	Institutes of Technologies Ireland
IT	Information Technology
ITS	Institute of Technology Sligo
MOU	Memorandum of Understanding
NFQ	National Framework of Qualifications
NSSE	National Study of Student Engagement
QAA	Quality Assurance Agency
RASI	Revised Approach to Student Inventory
RGAM	Recurrent Grant Allocation Model
RQ1	Research Question One
RQ2	Research Question Two
RQ3	Research Question Three
RQ4	Research Question Four
SES	Socio Economic Status
TAP	Trinity Access Programme
TCD	Trinity College Dublin
UK	United Kingdom
US	United States



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## **ABSTRACT**

Research on student retention and the student experience is very limited in the Irish third level sector; most of the existing research is concentrated in the university sector. Attempting to overcome this shortfall, this study examines two cohorts of students who are enrolled in technical and non-technical disciplines in an Irish institute of technology. The study uses institutional data, surveys and focus groups to build an understanding of the issues impacting on students and on student retention.

The study uses translational research which draws on the sociology of access and participation to understand the mechanisms shaping student engagement, retention and success. The research builds on Bourdieu's theory of educational inequality (1979), and a number of engagement models such as Tinto's Student Integration Model (1975) and Astin's theory of involvement (1999) with the objective of breaking Harker's (1984) cycle of reproduction.

The outcome of the research is the Student Engagement - Partnership Triangle which identifies key factors in student engagement and their drivers, with the objective of improving student performance, motivation, achievement and retention.

This model will inform institutional strategy, culture and values and operationally help the Institute develop successful widening participation initiatives with the aim of improving student outcomes and delivering equality of opportunity regardless of socio-economic status and academic background.

The study finds that the students are predominantly from the lower socio-economic classes, with no tradition of higher education in their families and communities. For these students to be successful requires them to feel that they belong to the institute and are confident in their ability to succeed. The institute needs to use every opportunity to build this confidence and sense of belonging, reinforcing the students' goals.

These findings should be applicable to the Irish institute of technology sector in particular when the institute is positioned outside a large centre of population.



# 1 CHAPTER ONE - INTRODUCTION TO STUDY

## 1.1 INTRODUCTION

My personal experiences as an academic were the motivation for this study. In my 15 years of working in higher education, ten of which was as departmental manager, I observed that certain students transitioned easily into higher education and had the necessary attributes and confidence to succeed, while other students struggled with higher education and did not make a successful transition. My motivation was two-fold. Firstly, my motivation was to develop a robust piece of work with the primary audience being the Doctor of Business Administration (DBA) examiners, and, secondly, I was motivated to improve the college experience of students in my Institute in order to improve student retention.

I was interested to discover why certain students were successful, settled in and completed their studies, while other students did not engage successfully in higher education and dropped out. Anecdotally, there were differences between programmes and departments and I was interested to discover successful initiatives which built confidence, engagement and student success.

This understanding has led to actions which improved the student experience for all students, particularly the cohort of students that are not currently being retained.

*“Being a TAP (Trinity Access Programme) graduate has had a very important influence on my family. Before I went to college none of my family had ever considered third level education. Now my extended family would aspire to attend a third level college when they finish school. (Respondent 54)” (Share and Carroll 2013: 28).*

Retention is important from the students’ perspective. However, student retention not only impacts on the student, but also on their families, their communities and the institutes in which they are enrolled. Many students of

the Institute of Technology, Sligo (ITS) are the first generation to attend third level education, as many of their parents did not complete or progress beyond the second level. These students are role models for their families and communities and, if they are successful in higher education, this will feed back positively to their families and their communities and thereby encouraging more first generation students to participate in higher education.

Conversely, if they do not succeed, this may impact negatively on the Institute and the communities for which they are role models and sow the seeds of failure in their families and communities and, therefore, reinforcing the cycle of reproduction (Harker 1984). Intergenerational benefits (i.e., cultural and social capital) that can affect cognitive and psychosocial development during college differ between first-generation students and their non-first-generation peers (Padgett et al. 2012). It is important that the Institute endeavours to level the playing field in this regard.

As the financial standing of the Institute and its reputation with funding agencies and other stakeholders is dependent, amongst other things, on retaining and graduating students, retaining students is important for the financial stability of the Institute. If there are high rates of student attrition, there is a reputational risk and the recruitment of future students could be adversely affected, particularly students from the lower socio-economic backgrounds.

The Irish Higher Education Authority (HEA) has statutory planning and policy development responsibility for higher education and research in Ireland. In addition it is the funding authority for a number of higher education institutions including the universities and institutes of technology. Additionally the HEA has wide advisory powers throughout the entire Irish third level sector.

The HEA is moving to a funding model based on student numbers. This new funding model will create a direct link between student success and institutional finances. This will incentivise institutions to focus on, and invest resources in, retention initiatives. The National Strategy for Higher Education to 2030 plans,

as one of its recommendations, to introduce a process of strategic dialogue, with the aims of enhancing accountability and performance and also to respect institutional autonomy (Strategy Group 2011). This recommendation was developed as the Higher Education Systems Performance Framework 2014-2016, which aligned national priorities with institutional priorities (HEA 2013). Key system objective 2.4 targeted higher education persistence and completion rates for under-represented groups, and objectives 3.2 and 3.3 focused on the student experience including student engagement, satisfaction and progression (HEA 2013). Ten per cent of institutional funding per annum will be dependent on meeting the agreed strategic objectives in an agreed performance compact between the institution and the Higher Education Authority. The systems performance framework will form the basis of the agreed compact. These measures will further align institutional funding with student completion.

Good student retention, therefore, is an issue of strategic importance for higher education institutions generally and also in the Institute of Technology Sligo (ITS), leading to benefits for the institute, students, the communities it serves and the regional and national economy whose growth depends on a ready supply of skilled and work ready graduates prepared for the challenges of the 21st century. A further development may be a move to outcomes- based funding of higher education institutions.

*“In the course of our meetings it became clear that the possibility of making at least some of the funding provided to the institutes conditional on some form of measures of outcome was being actively considered by the funding agencies.” (Kinsella et al. 2006: 45).*

The HEA systems performance framework 2014-2016 is a movement in this direction. This framework is designed to hold the higher education system responsible for delivering national priorities and increases the visibility of performance, with higher education institutions agreeing a performance compact which aligns institutional funding with the HEA's strategic direction.

Identifying causes of student attrition and issues which impact on student motivation at a programme and departmental level will lead to the development of strategic and operational initiatives that will enhance student satisfaction and student experience, thereby improving retention rates, as funding models evolve to become outcomes-based funding systems. There is therefore a need to more fully examine student satisfaction and its impact on student retention in the higher education system in Ireland generally and, more specifically, in the Institutes of Technology, where students generally enter with lower prior attainment and from lower socio-economic groups than the university cohort and have higher rates of non-completion (HEA 2014). Under the HEA systems performance framework, ITS agreed a compact which set targets for, amongst other things, the improvement of student enrolments and student retention by linking student retention to institutional funding. The challenge therefore is to increase both the participation and the retention rates.

This research examines the factors which impact on student retention and student success in order to understand and identify targeted interventions based on the student profile. This understanding allows academic programme development and recruitment to be more closely aligned with the students' abilities, building student success into programme design and supporting students with the most appropriate interventions to increase the probability of student success.

While students are surveyed on various issues in Ireland, there has not been a focus on the factors that lead to success and retention including student engagement or student satisfaction. There are no national student surveys currently used in Ireland with sufficient response rates to allow comparison of student satisfaction on different academic programmes in different Irish institutes. There are however plans to develop the national student survey beyond the current pilot phase to allow comparison between departments and institutes. An examination of student satisfaction can lead to a greater understanding, as Reason (2009) argues, that successful interventions increase student engagement and student retention. DeShields (2005) argues that dissatisfied students may drop out of college and the link between satisfaction and retention needs to be carefully managed (DeShields Jr et al.

2005). This research will also look at how satisfied the students are with their experiences and investigate the impact of student experience on retention.

Student retention is an important performance indicator for any higher education institution. Early intervention can assist students at risk and is critical in order to improve student outcomes. This early assessment and intervention is often based on limited information on the students and their motivations (Strauss and Volkwein 2004); however there is a balance between the time taken to gather and analyse information and the need for speed in identifying students at risk.

This study assesses students' pre-enrolment attributes to understand completion rates and identify students at risk. The identification of students at risk based on pre-enrolment information is also useful in setting the entry requirements to programmes so that students with statistically little chance of completing the programme are not offered places and recruitment and marketing strategies can target the students most likely to succeed. An alternative strategy would be to identify the students who are likely to face challenges in succeeding and put in place appropriate targeted supports. By understanding the needs and challenges of such a cohort, in tandem with appropriate programme design and appropriate admissions criteria, these measures can increase the retention rates and satisfaction of the students.

One of the factors of the study is the institute in which the research takes place. The Institute of Technology Sligo (ITS) is an institution with an applied regional focus and constitutes a broad socio-economic profile of students which is over represented by the lower socio-economic groups. Therefore, when considering the Institute's performance it is important to benchmark itself against similar institutions with similar student profiles. As most institutes of technology generally represent a wider range of socio-economic groups with a higher proportion from the lower socio-economic groups, the outcomes will be different when compared with a traditional university where the higher socio-economic groups are over-represented in the student population. This additional context gives a more precise indication of the effectiveness of the Institute, taking into



account the social, economic and psychological characteristics of first time students. When such factors are taken into account, institutes may be more effective in graduating students at a higher rate than comparable institutions.

Measuring additional parameters such as whether the student is the first of their family to attend third level education or how students rate their emotional health can increase accuracy of prediction by 66% (Gonzales 2011). Assessing these additional parameters, while worthwhile, will lead to delays in identifying students at risk and early intervention is critical. As Gonzales suggests, the more colleges know about students and their backgrounds the more successful they will be at helping them to finish their degrees. Therefore, the profiling of students is an on-going process and as more information is added to the profile the accuracy of prediction is increased (Gonzales 2011). There is a balance to be struck between full information and the impact of this delay on the student. This case study builds on the initial quantitative data in the student record system with three student surveys and four focus groups.

Tinto's 1975 research paper has remained the dominant sociological theory of how students navigate through post-secondary educational systems, theorising that the social integration of students increases their institutional commitment and, ultimately, their success. The model can be summarised as follows: Students come to university with a range of background traits, including race, secondary school achievement, academic aptitude, family background and financial context. These traits lead to an initial commitment to both the goal of graduating from college and the institute attended. As the students embark on their studies, academic and social integration and increasing commitment all have positive impacts on students' persistence (Tinto 1975).

Initial profiling may give us an understanding of the likely goal commitment of students based on their pre-enrolment profile. However, as students engage with other students, faculty and the institute, their goal commitment may change. For example a successful intervention to students at risk will reinforce the goal commitment and institutional commitment, leading to an increased likelihood of graduation. The important pre-college characteristics are socio-

demographic traits, academic preparation and student disposition (Terenzini and Reason 2005), indicating that there are a number of factors that impact on student retention. This thesis will recommend specific operational and strategic actions for ITS.

Sociological literature (predominantly from the US and to a lesser extent the UK, with a shortage of Irish literature) shows that we can make certain predictions about how well students will perform in higher education and that prior academic performance combined with other factors such as personal and social experiences and dispositions can be used to predict success (Tinto 1975, Astin 1985, Reason 2009).

Given that success can to a limited extent be predicted, the literature will also be examined to understand underlying mechanisms shaping student engagement, retention and success. Pierre Bourdieu's theory on educational inequality (1979) which suggests that students with more valuable social and cultural capital fare better than their peers, uses the concepts of capital, field, habitus and strategy, and is based on his hypothesis that ability is the combination of natural gifts and capital. These theories, therefore, point to a mismatch between the cultural capital of socially disadvantaged students and the cultural capital that is valued in higher education institutions and this may be one reason why such students are less successful. While this theory has been often drawn on to indicate the reproduction of inequality, the theory also has implications for practical strategies that institutions can take to engage more positively with students leading to better retention and completion outcomes. Zembylas (2007) for example discusses the transfer of capital to students from staff through empathy and a proactive engagement style.

This research will link these different bodies of knowledge together, taking a translational research approach that uses research techniques developed in basic research and applies them to applied investigations (Vogt et al. 2011). This has the potential to offer solutions at strategic and operational levels to increase student engagement and retention by addressing the lack of fit between the social background of the students and the cultural capital required

by the Institute for success. Addressing pedagogy in this context has the potential to lead to proactive engagement, increasing the students' ability to succeed. These solutions have the potential to better match the fit of the institutional culture with the enrolled student body.

This research will contribute to the field of knowledge on student retention by investigating student retention in an Irish Institute of Technology. The research aims to provide a better understanding of the strategic and operational actions which will improve the student experience and impact positively on student retention. As the study will be based on a limited sample size of students, these results are designed not to be generalisable but to open up important insights that can be explored further in research on other higher education institutions and disciplinary areas

## **1.2 CONTEXT OF STUDY: THE INSTITUTE OF TECHNOLOGY SLIGO AND IRELAND**

### ***IRISH HIGHER EDUCATION SYSTEM***

In 1995, the Irish government introduced the free fees initiative whereby the Irish exchequer pays the tuition fees to the higher education institutions on behalf of the students. To avail themselves of this initiative students have to be registered for the first time on qualifying, full-time, undergraduate programmes of a minimum of two years' duration. This initiative, coupled with the geographical spread of higher education institutions, caused a rapid expansion of the Irish higher education system and a reduction in the number of students who chose to be educated in other countries, most commonly, the United Kingdom and Northern Ireland, where Irish students at that time were awarded free fees. This policy decision had the impact of increasing the number of Irish citizens availing themselves of higher education and reducing the financial barriers to entry to higher education.

However, many of these students did not come from a tradition of higher education and may have lacked the appropriate social and cultural capital to

successfully proceed through higher education. While the free fees initiative was welcome, the issue of the broader changes, both financial and institutional, required to support the widening needs of the expanded student cohort were not fully considered. The subsequent massification of higher education in Ireland and the rapid expansion of the sector form the background to this study and provide the context for the study, alongside the attributes of the students and the Institute.

The Irish system of higher education is a binary system consisting of universities and institutes of technology. This binary system has two components, the institutes of technology which evolved from the Regional Technical Colleges (RTC) had a strong bias towards vocational and applied education and the teaching staff, while not prevented from, were not expected to be research active, leading to a lesser emphasis on research which was invariably applied research. RTCs were under the control of local government and their awards were externally validated. The university sector had more autonomy, more research active staff and delivered higher education through a more theoretical approach, with a greater emphasis on research, where academics were expected to generate research output and the universities also awarded their own qualifications.

### ***INSTITUTE OF TECHNOLOGY, SLIGO***

ITS is a third level Institute based in the north west of Ireland. It opened in September 1970 (as Sligo Regional Technical College) and has grown in size and mission over the 45 intervening years. It currently has a full-time enrolment of almost 4,000 students and 1,300 part time students; many of the part-time students study at a distance using online learning technologies. The Institute is recognised nationally as a leader in the provision of education using online distance learning technologies. The Institute also trains about 300 apprentices annually, especially in the construction industry, but this number is in decline from a peak of 900 due to the current recession and corresponding decline nationally in construction related activity in the economy.

In 1999, the Institute received delegated authority to award its own certificates and diplomas (two and three year sub degree programmes) and, over the

years, this power has been extended to include all sub-degree and degree awards, masters awards, and PhD awards in certain disciplines. The Institute will apply for delegated authority for all fields at PhD level over the next few years as research expertise is built up in the relevant discipline areas. Currently, the Institute has limited delegated authority at doctoral level for research in nominated areas in engineering and science. With the changes in awarding status and title, the Institute has gradually become more independent, expanding in size and mission to deliver programmes at higher levels, with greater diversity, research and links with local industry on innovation, enterprise and research.

Over 45 years, the institutes of technology in Ireland have evolved from further education colleges to higher education institutions with increasing student enrolments, range and level of programmes provided from initially two and three year programmes to PhD level research.

It is important to note that until each programme had a degree outlet, students wishing to study at degree level had to transfer to another college or university to complete their studies. Many students either did not complete education to degree level or moved to another higher education institute to complete their studies. This results in the courses in the early years having a vocational and applied focus and this heritage is present on many of the courses in the Institute. One impact of the students having to leave the North West of Ireland to complete their third level studies was that many never returned and these students settled in the cities where they chose to complete their studies. This led to a brain-drain and a lack of capacity in the North West which was addressed by providing a degree outlet for all programmes.

### ***CONNAUGHT ULSTER ALLIANCE (CUA)***

The Institute is a member of the CUA which was created in July 2012 under a Memorandum of Understanding (MOU) between Institute of Technology Letterkenny, ITS and the Galway – Mayo Institute of Technology. It is the ambition of the CUA to achieve technological university status which will require

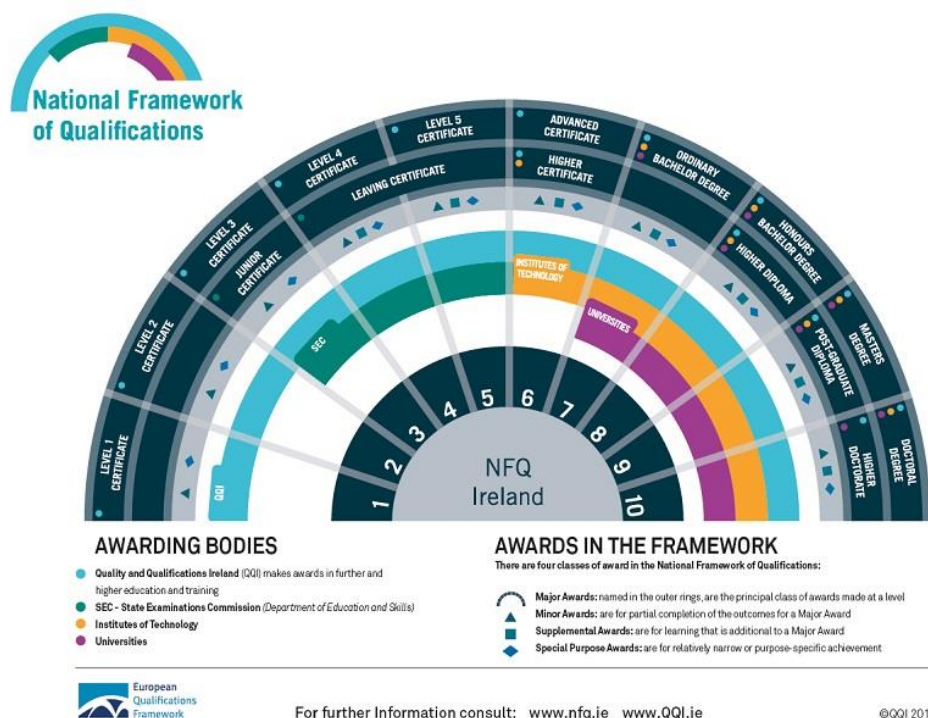
the merger of the institutes, and the alliance submitted a declaration of intent to seek technological university status in February 2015.

### ***ITS CONTEXT AND STUDENT PROFILE***

Most students travel home at the weekends to work and socialise and typically only have contact with their classmates and faculty for four days per week. With the rapid expansion of access to third level education over the past 40 years, many students attending the Institute would be from a farming or working class background and typically are the first generation of their family to attend third level education. This means that many students may not have positive role models who have experienced third level education and also will have limited social and cultural capital in the habitus of higher education. The positive role of the Institute in responding to these challenges is evidenced by the fact that 17% of the current student body comprises mature students, 6% of students have a disability and over 70% of the students are the first generation of their family to attend third level education.

### ***RETENTION: IRISH HIGHER EDUCATION***

The HEA is changing the funding model from one where institutes got a block grant to a more transparent funding model where institutes are funded based on the number of students present in the institute in March each year (Cosgrove 2011). This will impact on the finances of the institutes and the viability of certain programmes and should bring an increased focus on student retention in Irish higher education institutions. The recent implementation of the performance compact is a first step. The compact agrees a number of targets in the area of student recruitment and retention.



**FIGURE 1: IRISH NATIONAL FRAMEWORK OF QUALIFICATIONS (QQI 2014).**

A recent report on progression rates in Irish higher education has identified that the proportion of new entrants in 2007/08 who were not present one year later was 15%. This is an average across all sectors, disciplines and National Framework of Qualifications (NFQ) levels, against a background of increased participation in higher education in Ireland over recent decades. At present, one-third of the Irish adult population (aged 25–64 years) have a higher education qualification with 12% at NFQ levels six or seven and 22% at NFQ levels eight or above (Mooney et al. 2010).

### ***ATTRITION: ITS***

In common with all third level institutions, student attrition is a concern at ITS. The Institute has put in place support measures to assist students from disadvantaged backgrounds, including financial, equipment and learning supports and recently has appointed a student retention officer. There are also a number of initiatives run by individual academic departments, but there is limited understanding of the effectiveness of these initiatives. Despite these interventions, attrition is still a major issue for the Institute. There is a high dropout rate in the first year on many of the programmes in ITS, coupled with a high repeat rate in the summer examinations. A presentation from the

registrar to the academic council on 4th March 2010 identified that rates of non-presence vary strongly according to the NFQ levels and indicated, in particular that at NFQ level six non-presence was 38%, at NFQ level seven the non-presence rate was 25% and NFQ level eight the non-presence rate was 10%. (McCormack 2010). This evidence strongly suggests that retention, or non-presence rates are significant problems for the higher education sector in Ireland and ITS. These problems are more apparent for lower level programmes such as two year higher certificates, where entry requirements are generally lower.

### **1.3 AIM OF THE STUDY**

The core research question of the study is “**How can student retention be improved at Institute of Technology, Sligo?**” This question helps frame the literature review and the detailed research questions leading to a greater understanding of the causes and solutions to improving the retention rates in ITS.

Understanding the causes and solutions to improving retention rates is important because poor completion rates may be the unintended consequences of other policies, such as a drop in entry requirements, access policies and the massification of higher education. Institutes need to manage their student recruitment strategies to provide opportunities to students who do not have the necessary attributes to sustain a third level education to successful completion through appropriate and targeted support and interventions.

Understanding factors that impact on student retention, in particular at the individual student level, allows these factors to be compared with other student information such as socio-economic background and prior educational attainment. This understanding will allow a more appropriate and targeted intervention appropriate to the enrolled cohort of students.



There is limited research carried out on students within ITS, their initial perceptions of the Institute, factors which impacted on their decision to leave the Institute during the first year, and actions that the Institute could have taken to prevent these students leaving. If the cause of the dropout of these students was understood and the prior socio-economic status and educational attainment of these students was known, this information would be useful in planning interventions which would allow future cohorts to have improved retention rates.

#### **1.4 THE COLLEGE EXPERIENCE AND ITS IMPACT ON STUDENT RETENTION**

The research is based on a comparison of two student cohorts, one from an intake to computing programmes and the other from an intake to a social science programme in order to identify the issues and help understand why one programme is significantly more successful in retaining students than the other. Consideration was given to researching a cohort in another institution; however, access to the required student enrolment and performance data would have been problematic. Instead the study will compare the students on two programmes in different departments and schools within the Institute to understand both the differences and commonalities between different cohorts of students and the impact of the actions of decisions taken by individual departments and courses. Differences in these programmes should yield some clues to the causes of attrition and suggest appropriate institutional responses. Previous research by the author discovered a graduation rate of 32% on the computing programmes across two cohorts (n=130). Many of the students dropped out during their first year. The biggest single loss of students was the 33% of students who registered at the start of the academic year and did not attend for exams at the end of year one. This study focused on the student experiences of both cohorts and will suggest targeted interventions if the causes of student dropout can be understood.

For programmes and disciplines that experience a higher dropout rate, research can establish if there are pre-enrolment actions which can improve

retention and strategies that can be used to improve the college experience once students enter college to improve retention. Entry requirements can be set to maximise the graduation rate of the programme by not offering places to students who statistically have little chance of succeeding or, alternately, targeted supports can be put in place for these students and actions taken at institutional and departmental levels. This study not only focuses on the entry requirements but also on measures that can be applied to improve student retention once the students take up their place. These initiatives are important to the individual, their family and community, the Institute and the economy. ” As Terenzini and Reason (2005) indicate:

*The low persistence/completion rates and gaps reflect an unacceptable and unnecessary loss of individual, institutional, and national talent and resources (Terenzini and Reason 2005: 1).*

In addition to the costs incurred by the student and their community, there is also a loss of talent and resources to the economy. A study of non-completion rates concluded that, of the students who began their courses in 1995, 41.8% of students on the National Certificate in Computing (two year duration) completed on time in ITS. This compares unfavourably with 52.07% of all students nationally who complete their course on time (Eivers et al. 2002). Understanding the reasons why students are retained and the factors in student dropout will allow the Institute to implement appropriate and targeted actions at programme, departmental and institutional level. The research will identify departmental, school and institutional practices which aid retention and enhance the opportunity for students to succeed. The research will also identify the factors in student motivation and the match between student capabilities and motivation and the Institute’s academic and social characteristics which are of importance (Ben-Tsur 2007).

A model which identifies the factors and causes involved in student performance, achievement and retention will be helpful in understanding the measures that can be taken by staff, faculty and management to increase student retention and satisfaction in a targeted way so as to make it appropriate to the individual students. This would be valuable both financially and in terms of reputation to the institution and socially to the students and their

communities. This research attempts to identify the factors relating to student retention within such a model.

## **1.5 STRUCTURE OF THESIS**

The thesis is structured around seven chapters. Chapter two explores the literature under four broad thematic areas: student pre-college characteristics which impact on student retention; the college experience and its impact on student retention; institutional strategy; and other initiatives that can help improve student retention. This literature review, structured around four review questions, will help the reader to understand the issues that impact on student retention. The literature will be examined to understand the impact of pre-college characteristics on the college experience and on student retention, and will explore possible initiatives at a strategic and practical level that could be used to improve retention in order to benefit the individual, the Institute and the economy. The literature review will also identify gaps in research and will attempt to fill these gaps and aid the development of a model to better understand the factors that impact on student performance, achievement and retention.

Chapter three examines the options available to the researcher in understanding the issues identified in chapter two, i.e. looking at the research approach and design, outlining the methods used to answer the research questions.

Chapter four will present the findings of the research, and will discuss these findings, by examining the relevance of the student experience in both social and academic terms within the proposed model.

Chapter five will discuss the findings of the research, examine these findings through the lens of the research and consider possible strategic and operational initiatives which can be used to improve student experience in the Institute.

Chapter six contains the concluding comments, and chapter seven reflects on the professional doctorate journey undergone by the author.

## **2 CHAPTER TWO - LITERATURE REVIEW**

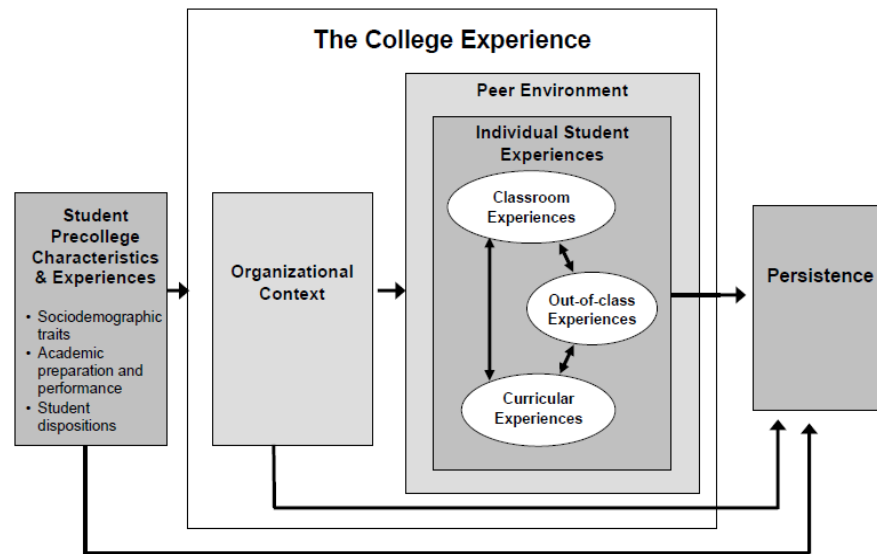
### **2.1 INTRODUCTION**

The literature review examines the lifecycle of the student to understand student retention and its relationship with the academic and socio-demographic profile of the student and, within an organisational context, will look at what can be done at both operational and strategic levels to improve student retention. A number of review questions were identified which will guide the literature review. In this way the questions will give focus to the literature review and will guide the choice of research questions which this research will attempt to answer.

This review will bring together different bodies of knowledge that are seldom brought together. It will draw on the sociological literature on student social disadvantage and educational success based on the work of Pierre Bourdieu and will examine the underlying mechanisms to better understand student success and retention. This will frame the review of the literature and models such as Tinto's conceptual schema for dropout from college (1975), Astin's input-environment-outcome model (1999) and Bean's student attrition model (1980). This understanding will be expanded to address pedagogical concerns such as successful student engagement, learning styles and retention.

This literature review is based on four review questions. These guide the review of the literature on student retention through the student lifecycle from pre-college attributes, student engagement and student retention, and finally explore what institutional interventions can be deployed at both strategic and operational levels. These review questions also explore relevant educational theories and propose a number of related research questions. This systematic approach (outlined in Table 1) will guide and add focus to this literature review. The literature review will initially focus on the work of Terenzini and Reason (2005) and their model of influences on student learning and persistence.

The literature will also be examined to discover the impact of prior educational attainment and socio-economic background on student retention and look for strategies for managing student completion rates and, in particular, whether the solutions were targeted to particular groupings.



**FIGURE 2: INFLUENCES ON STUDENT LEARNING AND PERSISTENCE (REASON 2009: 661)**

**TABLE 1: REVIEW QUESTIONS MAPPED AGAINST A THEORETICAL FRAMEWORK**

Review Question	Theory	Educational Theory	Literature Review Focus
<b><u>Question One</u></b> What are the student pre-college characteristics which impact on student retention?	Student precollege characteristics & experiences	Impact of:- <ul style="list-style-type: none"> <li>• Prior educational attainment</li> <li>• Social, Cultural and Economic Capital.</li> <li>• Barriers to higher education.</li> <li>• Family and Community</li> </ul>	<ul style="list-style-type: none"> <li>• Bourdieu et al and reproductive theory.</li> <li>• Reproduction</li> <li>• Capital</li> </ul>
<b><u>Question Two</u></b> What is meant by student engagement?	The college experience	Definitions <ul style="list-style-type: none"> <li>• Styles of engagement</li> <li>• Responsibility for engagement</li> <li>• Measurement of engagement</li> <li>• Learning type</li> <li>• Student experience</li> <li>• Peer experience.</li> <li>• Student change in college</li> </ul>	<ul style="list-style-type: none"> <li>• Student identity,</li> <li>• engagement</li> <li>• experience</li> <li>• Student change.</li> </ul>
<b><u>Questions Three</u></b> What factors impact on student retention?	Factors which impact retention	Factors <ul style="list-style-type: none"> <li>• Student disposition</li> <li>• Student motivations</li> <li>• Institute</li> <li>• Organisation</li> <li>• Models of student departure</li> </ul>	Institutional and student factors which impact on retention Models of student departure.
<b><u>Question Four</u></b> What are the strategic and operational options available to the institute to improve student retention?	Operational and strategic decisions the institution can make.	Decisions <ul style="list-style-type: none"> <li>• Resource Deployment</li> <li>• Student Interventions</li> </ul>	Achieving educational excellence leading to improved student experience and greater retention rates.

These review questions will be further drilled down to achieve a competent review of the literature.

## **2.2 THE REVIEW QUESTIONS**

The literature review was structured around four key review questions:

- What are the student pre-college characteristics which impact on student retention?
- What is meant by student engagement?
- What factors impact on student retention?
- What are the strategic and operational options available to the Institute to improve student retention?

## **2.3 REVIEW QUESTION ONE – WHAT ARE THE STUDENT PRE-COLLEGE CHARACTERISTICS WHICH IMPACT ON STUDENT RETENTION?**

This question will focus on key insights of Pierre Bourdieu. Bourdieu's work is important in understanding the relationship of the students' backgrounds to their higher education outcomes. This background impacts on the volume and types of cultural capital they have supporting them through their higher education studies. In order to understand the work of Bourdieu, it is necessary to understand some concepts that are recurring themes in his literature - fields, capital, habitus and strategy - in order to examine how these concepts relate to his theories on educational institutions.

### **Fields**

A field is defined as a bounded space held together by shared social practices and a configuration of positions comprising agents (individuals, groups of actors or institutions) struggling to maximise their positions (Maton 2005).

The relative autonomy of fields can vary over time and between fields. The intellectual field of university education, conceptualised as a field with a high

degree of autonomy, generating its own values and behaviours and is relatively independent (Naidoo, 2004).

The field has a number of important attributes or structural properties. Firstly, the field has a key form of resources which are termed capital and these are the most valued resources in the field and may change over time. There may be an on-going struggle for legitimisation between actors where style and legitimation change rapidly; this is particularly the case in fields where cultural capital is most valued. Secondly, the field is structured in hierarchy based on the types and amounts of capital such that there is a struggle for position between those who have power in the field and those who seek to undermine these advantages. Thirdly, there are rules in the field and entry requires acceptance of the rules, allowing some forms of legitimate struggle, while other forms of challenge are excluded. There is a common interest in preserving the field by dominant actors even while there is contestation. Fourthly, the field is structured by the field's internal mechanisms of development. Finally, and fifthly, external sources of influence are always mediated through the structure and dynamics of the field (Swartz 1996).

### **Capital**

For an educational institution, within the field there are struggles to agree what is the most important form of capital in the institute, economic or cultural capital. For example, there is a tension between established actors in the institute and new arrivals for power, students and staff. Entry to the field requires acceptance of the rules and legitimises some struggles. There is a common interest in preserving the institute and the institute's internal structure always mediates the effect of external influence. Field theory therefore means that there are struggles between what is important and this will guide the strategic and operational intent of the institute. There is tension between members of the community and there is agreement on the rules and what is considered legitimate dissent. All members of the institute are interested in its preservation and external actions are always mediated by the institute. This theory has important signposts on how to successfully influence change in an educational institution, by understanding the struggles, tensions, rules and influence of external factors on the institute.



Bourdieu et al (1979) identifies a number of types of capital which are resources that are valued and profitable in a field. There are three types -, economic, cultural and social capital. Economic capital refers to the income and other financial resources available, cultural capital may take various forms, reflecting the modes of thinking, values, dispositions, sets of meaning and qualities of style that are primarily transmitted through the family. Cultural capital can also be embodied (dispositions of mind and body), objectified (cultural goods) and institutionalised (educational qualifications) (Zembylas 2007). Cultural capital refers to embodied dispositions towards various cultural goods and practices (Lingard and Christie 2003). Social capital is linked to social networks and relationships. The volume of social capital possessed by any individual is measured by the aggregate of the “*size of the network of connections*” and the amount of economic, cultural and social capital possessed by these connections (Lingard and Christie 2003). It can be considered as the amounts of cultural and economic capital that can be mobilised through social networks (Van de Werfhorst 2010).

The capital operating in the field of university education is an institutionalised form of cultural capital, termed academic capital. Academic capital is linked to the power of the institution in the reproduction of the university body, and is based on properties such as prior educational achievement, a disposition to be academic and designated competencies (Naidoo, 2004).

### **Habitus**

Bourdieu et al (1979) argues that habitus becomes active in relation to a field, and the same habitus can lead to very different practices and stances depending on the state of the field (Reay 2004). A habitus may be seen as a personalised concept of culture that is the way culture is embodied in the individual (Harker 1984). This means that culture is both a personal attribute and that it has to be considered in the context of its use.

## **Strategy**

Strategy for Bourdieu et al (1979) refers to appropriate actions taken without conscious reflection rather than conscious individual rational choice. Strategy entails mastery of the logic acquired by experience, part of the habitus. This allows for actions guided by constraints, improvisation, different levels of skill and choices to be made in particular situations (Lingard and Christie 2003). Therefore, the skills and choices made in a given situation are largely subconscious responses but may be either constrained or improvised by the particular situation.

## ***BOURDIEU AND HIGHER EDUCATION***

Bourdieu et al (1979) uses the concepts of capital and habitus to theorise ways in which educational systems tend to reproduce inequalities from generation to generation. He argues that schools misrecognise the incommensurability between the habitus of students from disadvantaged backgrounds and the habitus implicit in the curriculum and pedagogies of schooling, and this lack of ease with the arbitrary cultural demands of schooling is indicative of a “*lack of ability*” (Lingard and Christie 2003). Therefore, cultural capital (in Bourdieu’s work on cultural reproduction) ultimately functions to reproduce social advantage and this advantage is transmitted to children reaching a higher level of schooling or attainment of higher level occupations. (Van de Werfhorst 2010).

*“Higher education is conceptualised as a sorting machine that selects students according to an implicit social classification and reproduces the same students according to an explicit academic classification” (Naidoo, 2004: 459).*

Bourdieu highlights that, within a field containing a collection of individuals seeking to maximise their position, there are individuals with capital which has value in the context of the individuals and the field. The context in which this capital is used is called habitus and the individuals subconsciously act out according to an individual’s strategy which allows for constraint in action and improvisation. Students can therefore deploy their capital to maximise their position and students with lower quantities of capital are in a disadvantaged

position relative to the students who have the privilege of relevant capital bestowed upon them.

### **Ability**

In the higher education system, students and lecturers vary according to the amount of social, cultural and economic capital they possess. Bourdieu et al (1979) argues that all teaching implicitly presupposes a body of knowledge, skills and, above all, modes of expression which constitute the heritage of the cultivated classes, and that those who believe that everyone would have equal access to higher education once the economic means were provided ignores the fact that ability measured by scholastic criteria stems not from natural gifts but from greater or lesser affinity between class and cultural habits. In this statement Bourdieu is recognising that ability is a combination of both natural gifts and cultural capital.

Students who have types of social capital that is not acknowledged or rewarded in higher education institutions are perceived to have less ability. So, when considering a student's ability, it is necessary to consider the cultural capital available and indeed capital has the ability to amplify natural gifts. Bourdieu argues that various social classes are unequally represented in higher education, particularly in the elite universities (in a hierarchy of institutions, the most privileged students monopolise the top universities) and social classes most represented in higher education are least represented in the population. This view held by Bourdieu was at a time when education was elite. In the context of massification, Naidoo (2004) and Ball et al (2002) argue that socially advantaged students tend to gain admission to elite institutions while those who are socially disadvantaged end up in low status, poorly resourced institutions.

### ***THE IRISH CONTEXT***

An HEA study also finds that there is a differentiation between students in the university sector when compared with the institute of technology sector.

Students from the traditionally under-represented groups (the non-manual, skilled-manual, semi-skilled manual, and unskilled backgrounds) are more numerous in the institutes of technology, while the student composition in the

university sector tends to be skewed toward the middle and upper ends of the socio-economic spectrum (HEA 2010a).

**TABLE 2: CLASSIFICATION WAS ASSIGNED BY SECTOR 2008/2009 – 2009/2010 (HEA 2010A: 116) WITH POPULATION DATA (CENTRAL STATISTICS OFFICE 2006).**

Socio-economic Group	Socio-economic Profile					
	University Respondents		IoTs and DIT Respondents		CSO Data Ireland	CSO Data Connacht
	2009/10 (%)	2008/09 (%)	2009/10 (%)	2008/09 (%)	2006 (%)	2006 (%)
Employer and Manager	20.2	20.9	15.6	17.9	15.3	13.5
Higher Professional	14.1	12.5	5.6	5.1	5.8	5.2
Lower Professional	11.2	11.4	6.9	6.8	10.7	11.3
Non Manual	9.6	9.7	9.6	9.2	19.3	17.7
Skilled Manual	9.7	10.7	15.2	15.8	10.1	10.0
Semi-Skilled	4.4	5.9	6.2	7.4	8.4	8.7
Unskilled	1.7	2.8	4.2	5.7	3.8	3.8
Own Account	7.2	7	7.8	7.8	4.3	4.5
Farmers	8.9	8.7	7.4	9	3.9	7.1
Agricultural Workers	0.5	0.4	0.6	0.7	0.06	0.7
Others and Unknown	12.5	10.1	20.9	14.6	17.8	17.6

This general pattern of intake is also reflected in the higher proportions of new entrants in receipt of maintenance grants in the institutes of technology, 34% compared with 25% in the universities in 2007 (Mooney et al. 2010). Therefore, in the higher education system, elite students who have more social cultural

and economic capital are more likely to be found in the university sector and these students by virtue of their capital will have more ability. Students from skilled-manual, semi-skilled manual and unskilled backgrounds are more represented in the institute of technology sector with 25.5% compared to 15.8% in the university sector (HEA 2010a).

Table 2 demonstrates that higher socio-economic groups are better represented in universities when compared with the lower socio-economic groups and, conversely, that lower socio-economic groups are represented in institutes of technology. The Irish Central Statistics Office (CSO) data from 2006 shows that in the catchment area of the Institute, Connacht, the population is under represented in the higher socio-economic groups and over represented in the lower socio-economic groups when compared to the national data (Central Statistics Office 2006).

The HEA also commissioned two reports to examine progression in Irish higher education. The first report in 2010 recognises that progression and completion were of growing importance and resonated with other related areas such as equality, efficiency and skills development, in addition to individual student characteristics such as gender, age, socio-economic background and prior educational attainment. The first report notes that non-presence varies strongly by sector, level and discipline and is impacted by prior educational attainment, with females, mature students and students from the higher socio-economic groups performing best. The report singles out computer science programmes as being problematic even when taking into account all other factors (HEA 2010b). A follow on report which used the same methodology as the 2010 report found that overall there was a decline in progression from 15% to 16% between the reports; however, there were significant improvements in computing with rates improving by at least two percentage points across all levels since 2010. The report also found that there were differences in performance by socio-economic groups with non-progression of agricultural workers increasing from 11% to 14%, while the students from semi and unskilled socio-economic groups improved by two percent (HEA 2014).

### ***THE CYCLE OF REPRODUCTION***

Bourdieu et al's (1979) major insight on educational inequality is that students with more valuable social and cultural capital fare better in school than do their otherwise-comparable peers with less valuable social and cultural capital (Lareau and McNamara Horvat 1999). This effect has been explained by Goldthorpe (2007) as follows. Students from the dominant class are advantaged over children from the subordinate class as they share a common mode of speech, style and social interaction with their teachers, and neither the syllabus or teaching manner are strange to them. In contrast, for working class children, school will represent an alien or hostile environment, positioned in a social and cultural world where they feel out of place. These students generally will fail to reach the higher levels of the educational system because they are excluded by inadequate performance or they exclude themselves because of a lack of confidence or appropriate social and cultural capital (Goldthorpe 2007).

When predicting student achievement, two factors come into play: the natural gifts of the student and the capital available to the individual. Students need more than financial supports to be successful in higher education. They also need the appropriate social and cultural capital. Students from higher socio-economic groups experience higher cultural capital within their everyday interactions. Typically their parents and siblings have or are undertaking higher education. They have support from their family and have positive educational role models who support their studies at all levels. They also typically have experienced a second level education system which is strongly dependent on their ability to manipulate the abstract language of ideas. These students are more knowledgeable regarding their choice of programme and have a more clearly defined career path, giving strong goal and institutional commitment. They also have strong self-assurance.

Students from higher socio-economic groups derive from their background habits, skills and attitudes through interaction with peers, which serve directly in scholastic tasks and they also inherit knowledge, know-how and good taste, while students from lower socio-economic groups are doubly disadvantaged.

They have not had the facility to assimilate culture or the propensity to acquire it (Bourdieu et al. 1979). As discussed previously ability is a combination of capital and natural gifts.

Students from a lower socio-economic background with access to less capital as a consequence have less ability than students from higher socio-economic classes with the same natural gifts and higher levels of relevant capital available. There is a link between the student's capital relevant to the habitus of the institution, and changes to the habitus or educational environment have the potential to make the student's existing capital more relevant in the revised habitus, with a corresponding rise in ability.

Figure 3 demonstrates that the assimilation of cultural capital is necessary to move from a cycle of reproduction of failure to one of success. This can pose as an insurmountable barrier for students from working class backgrounds, particularly in elite institutions. This additional cultural capital increases the student's ability, making the student more likely to succeed. Institutions where students move from a cycle of failure to success are creating cultural capital (Goldthorpe 2007). In order to change the cycle of reproduction from one of failure to one of success, educational institutes at second level will need to increase the cultural capital of their students. Institutions at third level will need to remove barriers caused by lack of social and cultural capital and build opportunities for success into their programmes, recognising that ability is a combination of gifts and capital, and building student's confidence and capital at every opportunity or make the institutional habitus more appropriate to the enrolled students which will also enhance ability.

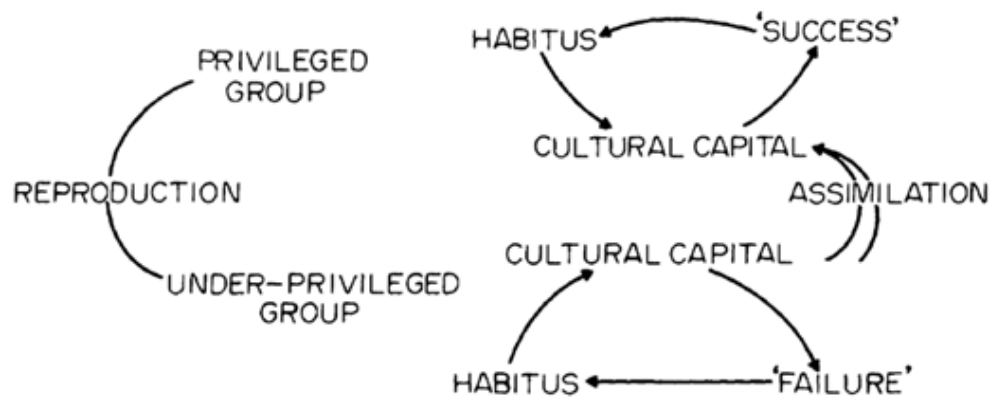


FIGURE 3: THE CYCLE OF REPRODUCTION IS TAKEN FROM (HARKER 1984: 118).

### **DIFFERENTIATING FACTORS**

Bourdieu has identified a number of attributes that differentiate under-privileged and privileged students. He calls these differentiating factors and these factors differentiate the students with cultural capital suitable for the habitus of higher education and those without suitable cultural capital. The key point is the suitability of the cultural capital, as it could be argued that most people would have a quantity of cultural capital. It is the relationship of the cultural capital with the environment or habitus that is a key factor. These factors are a result of the background of the student prior to entering higher education. These differentiation factors are a measure of the volume and relevance of cultural capital available to the student and a predictor of success which, when combined with natural talent, lead to ability.

TABLE 3: DIFFERENTIATING FACTORS (BOURDIEU ET AL. 1979)

Cultural Factors	Social Factors
Social Origin	Social Origin
Scholastic Age	Working while studying
Self-Assurance	Living at home
Habits and skills of privileged students, not just inequality of income.	Unequal scholastic achievement between social classes
Facility to assimilate culture and propensity to acquire it.	Unequal knowledge about programmes and careers (ill informed decisions, forced choices or lost time)
Division of labour and distribution of gifts between sexes.	Number of members of extended family who have been to third level
	A positive role model outside the institute.



Higher education institutions need to have an awareness of the differentiating factors and enact strategies which will level the playing field in this regard by providing alternative and complementary policies and strategies. This will have the effect of making the institutional habitus more appropriate to the student body.

### ***MASSIFICATION OF HIGHER EDUCATION***

With the democratisation or massification of higher education in the UK which has a participation rate of over 40%, Shelley (2005) points out that the number of 18-30 year olds in higher education rose from 12% in the 1980s to 43% by 2002. As a consequence, there may inevitably be more students who will be categorised by Bourdieu et al's differentiating factors as lacking the appropriate cultural capital for the higher level education habitus and, as a result, according to Harker's model in Figure two, these students may not acquire a sufficient volume of cultural capital and are destined to a cycle of failure.

A counter argument might be that a higher share of the student cohort has the social and cultural capital necessary to participate successfully in higher education and that social reproduction has been successful in increasing the number of participants in higher education. However as ability is related to the capital available to the individual, massification of higher education will lead to students with lower ability participating in higher education. With the increase in numbers of students attending higher education, equality of opportunity is an important consideration. There is a close relationship between social class and high school grades and admission test scores and, also, the institutes to which the students apply for admission. Higher performing students from lower socio-economic classes are less likely to attend a prestigious institution than students from higher socio-economic classes (Astin 1985). In 1995, the government abolished higher education tuition fees in Ireland and replaced fees with additional exchequer funding, with the objective of promoting educational equality. This provided the financial capital but ignored the cultural needs of students. The increase in uptake of higher education attributed to this initiative was as a result of the greater number of students available to take up places in higher education. However, while the numbers of students from lower socio-

economic backgrounds increased, as a share of the student cohort they remained constant (Denny 2010).

### ***BARRIERS TO HIGHER EDUCATION***

While focusing on social and cultural issues there is a danger of ignoring the poverty-related barriers to equality in education. The documentation on working-class culture has been written by middle class writers and researchers leading to a working class culture that is neither fully understood by those outside it nor properly documented (Lynch and O'Neill 1994). This shortage of economic capital or poverty limits the ability of working class families to overcome social disadvantage by applying economic capital. It is important to try and fully understand the culture of disadvantaged groups and the particular barriers that they face in a higher education institution.

### ***TRANSFORMATION OF CAPITAL***

Zembylas (2007) builds on the work of Bourdieu et al (1979) and examines emotional capital. He probes how students use emotional capital built over time, within classrooms and schools, expressed through the circulation of emotional resources among teachers and students. This emotional capital is systemically transformed into social and cultural capital manifested by stronger relations in the classroom and empowered feelings in the school community (Zembylas 2007). This gives an insight into how initial deficiencies in cultural capital can be remediated by the circulation of emotional resources between teachers and students. This explains the positive influence that some lecturers have on the students, equipping them with the additional cultural capital necessary for success. For emotional capital to be effective, staff must have empathy with students and their circumstances:

*“if higher education is sincere about creating positive learning environments for all students, then each person who works with diverse populations must also value these diverse developmental issues”*  
(Torres et al. 2003: 7).

Faculty with empathy can transfer capital to students who are disadvantaged in this regard. This empathy between staff and students has the effect of

converting the emotional capital which is transferred by empathy to an increase in cultural capital of the students. This increase in cultural capital leads to an increase in the ability of the students, increasing their likelihood of success. It is important that every opportunity is taken to build the capital available to students. However, changing the culture and the cultural capital of the individual is not without its problems. A majority of working class students experience difficulty in negotiations around identity in which the potential benefits in terms of improved opportunity need to be balanced against the potential cost of losing one's working class identity (Reay 2010). When given a choice, working class students were less likely to select an elite university over another higher education institution as the authentic self does not have to be divested of its working classness (Reay 2010). Therefore, a working class student offered the opportunity to attend an elite university, with the academic ability to succeed, may not elect to attend the institution because the elite institute may cause issues around identity and, even if this is overcome, they may not have the cultural capital to succeed. This further reinforces the cycle of reproduction. Students require, in addition to financial capital, the appropriate social and cultural capital in the habitus of their chosen third level institution in order to maximise their ability and probability of success. There is a real risk for the students that they lose their working class identity and do not transition and survive at college, thus alienating themselves from their communities.

### ***INSTITUTIONAL DIFFERENCES***

While I have made some general assumptions regarding the interaction between the student and the university, the characteristics of the university are also important. In the UK, universities can be broadly divided into research-led, internationally-recognised universities with high levels of prestige, characterised by elitism, highly competitive admission, traditional teaching and pure and basic research, in contrast to modern open and accessible universities offering a range of flexible and modular courses, delivering applied and vocational courses concentrating on applied research and consultancy. Students from research led universities generally command higher salaries as graduates (Leathwood 2004).

The Institute's mission and the associated student admission policies will lead to different experiences for students and a socially-differentiated higher education sector reinforcing the cycle of reproduction in elite universities. There are a number of initiatives in elite universities with the aim of including students from lower socio-economic backgrounds, who are the first generation to attend third level education. A successful example is the Trinity Access Programme (TAP) of Trinity College, Dublin (TCD) (Trinity Access Programme 2008). TCD researched the impact of an initiative to support students from lower socio-economic backgrounds on their families and communities (Share and Carroll 2013). The TAP initiative was running for over 20 years and benefited over 2,000 students. This research examined student life before college, their experience in college and life after college. The research report reinforced the literature outlined in the earlier part of this chapter on the barriers to education and the positive impact on families.

#### **RESEARCH IN THE IRISH CONTEXT**

Research in the Irish context is generally carried out by the HEA, The Economic and Social Research Institute (ESRI) and a small number of researchers and research teams in the third level sector. The HEA commissioned a study on progression in higher education in 2010. This study identified that, at a more personal level, successful completion is important to the educational and intellectual development of individual students as well as to their self-esteem. The study found that in pretty well all respects people who drop out are no better off than people who didn't go to university at all, and often actually worse off. It's a dangerous fiction that dropping out doesn't matter (Mooney et al. 2010). While the study provides quantitative data regarding factors that affect student retention, such as prior examination performance, it does not consider the social or cultural factors that impact on student performance.

*"Such conclusions would be based solely on 'raw outputs' without regard for the fact that the context and the student body differ so considerably across institutions." (Mooney et al. 2010:P12).*

The study identifies educational attainment as a factor which is influenced by social class: on average the higher social classes attain higher points in the leaving certificate examination.

This may suggest differentiation factors identified at higher level by Bourdieu could also be relevant for secondary level education and that the social and cultural factors are relevant across the entire spectrum of education. The study argues that the performance of students in mathematics in the leaving certificate examination reflects inequalities in the extent to which different socio-economic groups derive benefit from the Irish school system. The authors identify short-comings of their study.

*“Unfortunately, the data does not include more subjective information, like motivation for enrolling in higher education, financial wellbeing, participation in part-time employment, academic engagement, views on teaching staff, and attendance and participation in non-academic social and cultural activities, all of which may be expected to play a role in student retention.” (Mooney et al. 2010: 42).*

The HEA also examined the low participation in higher education by the non-manual group. This study examined a range of issues for students resulting from their socio-economic background. The average percentage of school leavers who completed the leaving certificate examination was over 80% in 1997 and increasing slightly to 2007, with more females than males completing the leaving certificate. Students whose parents were classed as professional had a 90% completion rate, while the completion rate for unemployed parents was at 60%.

This may indicate that Bourdieu was correct when he hypothesised that ability is the combination of natural gifts and capital, and that the higher capital of the professional class translated to higher completion rates in the leaving certificate. This is a challenge in recruiting students from lower socio-economic backgrounds to third level, as students from these backgrounds are less likely to have completed secondary education successfully.

The study also found that females with the same characteristics are almost four times more likely to complete second level education as male students. Also,

students whose parents have degree level education are over five times more likely to complete second level education (McCoy et al. 2010). When students come to college with lower prior educational attainment, they are more likely to come from a lower socio-economic background and are also likely to lack the appropriate social and cultural capital.

The challenge for the institute when setting lower entry points to programmes is to manage successfully the transition of the students to third level, given the students' academic, financial, social and cultural capital.

### ***SOCIO-ECONOMIC IMPACT***

McCoy (2010) also examined the impact of socio-economic background on leaving certificate examination performance. He found that, for the highest performing group, females considerably outperform their male counterparts; students from advantaged backgrounds are more likely to perform better; students whose parents are in the professional / employer / manager groups are more likely to be in the group who get five honours or higher, and the social mix of the second level school has an additional impact on educational outcomes with students in schools from non-disadvantaged areas more likely to participate in higher education.

In the Institute of Technology sector, entry to honours degrees is limited to students who have two honours or higher. The study found that higher /lower professionals and farmer/other agriculture had the highest probability of attaining two honours, indicating that as a consequence there may be class differences between students on level six/seven and level eight programmes. These students are more likely to attend a university than another type of higher education institution and, when in third level, young people from non-manual and semi/unskilled manual backgrounds are least likely to enter higher status honours degree courses (McCoy et al. 2010).

The study also examined students who dropped out of higher education within two years of entry. Dropout rates were particularly high amongst students from

non-employed backgrounds, raising questions over the adequacy of supports for those from disadvantaged backgrounds to fully participate in college life and to fully integrate into higher education. While these reports indicate that there is a relationship between socio-economic background and performance at second level, there is limited research on this phenomenon in the institute of technology sector in Ireland. These shortcomings suggest the need for a more detailed study of the student in the Irish context and that there are policy implications at a national level.

### ***FAMILY AND COMMUNITY IMPACT***

*“TAP student role models affect their family in ways such as demystifying third level participation, introducing a lifelong learning approach to educational attainment, and raising family members’ aspirations for formal education as well as their belief in their academic potential were recurrent themes” (Trinity Access Programme 2008: 15).*

The impact of student retention on families and communities cannot be underestimated. The successful students from lower socio-economic backgrounds provide positive role models, raising the aspirations for their peers, families and communities.

### ***SUMMARY***

This section examined the role of capital and its interaction with the environment and its impact on student ability and success. Educational institutions may have the potential to transform capital, increasing the opportunities for students and their cultural, social and educational capital.

An awareness of the issues can be useful in planning operational and strategic change in an institute, breaking the cycle of reproduction. The work of Bourdieu et al (1979) provides a lens through which to view the relevant capital available to the student in the context of higher education. Bourdieu believes that, to be successful, students require more than financial capital to succeed. This social and cultural capital conspires with the student’s natural gifts to define the ability

of the student. This approach is in contrast to the deficit model which focuses on the student as the problem, not the institute or pedagogy.

When lecturers positively use emotional capital in the classroom, this can be converted to social and cultural capital empowering the students, and initial shortfalls in cultural capital can be remedied by the circulation of emotional resources between teachers, and this explains why some lecturers have such a positive impact on their students (Zembylas 2007). It is imperative that good practice which leads to the exchange of capital becomes widespread and embedded into the institute.

While Bourdieu offers a set of high level macro theories, the next section considers the theories which explain the affect that the institution plays in the role of the educational engagement and achievement of the students. These theories, together with Tinto's student integration model, Astin's theory of involvement and Bean's student attrition model, are all useful at a practical level to help show what factors boost retention and performance and the limits of what is possible at the level of the institution.

It can be considered therefore that Bourdieu's theories frame the thesis, help understand the importance of the various types of capital and the impact of this capital in influencing student success. Reviewing the literature on student engagement and models for student success will provide the micro level theories and will lead to the development of a model for successful student engagement thus leading to improved retention.

## **2.4 REVIEW QUESTION TWO – WHAT IS MEANT BY STUDENT ENGAGEMENT?**

### ***PERSPECTIVES ON STUDENT ENGAGEMENT***

There is an extensive body of literature on student engagement which focuses on the interaction between students, educational institutions and national bodies. To define student engagement precisely can be problematic as there



are a variety of interpretations of the definition of student engagement with a national, institutional or student focus. One definition which is quite comprehensive is:-

*“The most important factor in student learning and personal development during college is student engagement, or the quality of effort students themselves devote to educationally purposeful activities that contribute directly to desired outcomes” (Hu and Kuh 2002: 555).*

This definition recognises the importance of student effort to achieve the desired outcomes and that the student must engage with the academic process to achieve success which is directly related to their engagement with the educationally purposeful activities.

As well as this positive view of student engagement, there are also two other possible interpretations, Firstly, students can be seen as having engaged with the Institute in a neutral way as one might slot an appointment into their calendar. The second, darker, view is that for students who find the university culture foreign, alienating and uninviting, the engagement experience is like engaging in a battle. This negative engagement can either be passive leading to apathy and withdrawal, or active leading to negative engagement in the form of conflict (Trowler 2010). Therefore, for the student the engagement can be positive leading to the achievement of desired outcomes, or negative leading to apathy, conflict and withdrawal.

### ***STUDENT PERSPECTIVE***

Positive student engagement is important because it is a good indicator of higher student outcomes and academic success. Coates (2007) describes student engagement as encompassing academic and non-academic/social aspects of the student experience. Engagement is seen to comprise active and collaborative learning, participation in challenging academic activities, formative communication with academic staff, involvement in enriching educational experiences, and feeling supported by university learning communities. As this list suggests, engagement is a broad construct intended to encompass salient academic as well as certain non-academic aspects of the

student experience. Students who are engaged outside the classroom therefore are building social and cultural capital and networks which will increase their ability. This builds on Hu and Kuh's (2002) definition of educationally purposeful activities to include the non-academic and social/cultural aspects of college.

Providing an institutional environment which supports student engagement and students taking up the opportunities in order to build up their capital through such engagement is key.

### ***INSTITUTIONAL PERSPECTIVE***

The literature identifies a number of institutional engagement styles. These give the first clue that there are engagement styles which may differ depending on discipline and institution. Institutional engagement types are diverse. Pike and Kuh (2005) documented seven different types of institutional engagement styles based on an analysis of the first four National Study of Student Engagement (NSSE) national reports. These institutional engagement styles are:-

- interpersonally fragmented,
- homogenous and interpersonally cohesive,
- intellectually stimulating,
- interpersonally supportive,
- high-tech low-touch,
- academically challenging,
- supportive and collaborative (Pike and Kuh 2005).

Individual institutional engagement styles are generally the result of taking or not taking strategic decisions regarding the relationships between the learner and the institution. Institutional engagement styles are not the focus of this research as all the students are members of the same institute and any institutional strategic influence should apply equally to all students regardless of discipline.

## ***INTERNATIONAL PERSPECTIVE***

Student engagement or how the student embraces all aspects of study and life at college is enjoying widespread currency in North America and Australasia where it has been firmly entrenched through large scale national surveys.

In contrast, the UK literature consists of an emerging body of work primarily concerned with small single case studies or articles in grey journals (Trowler 2010). In Ireland, there has only been recent progress in carrying out a national student engagement survey and research on student engagement is very limited. The survey is only in its second year and there is limited publicly available information. As a result the literature mainly focuses on the United States, Canada and Australia where there are several years of study results and these have been researched and analysed.

## ***TYPES OF STUDENT ENGAGEMENT***

There are a number of engagement types. I will consider positively and negatively engaged and disengaged students, discuss the dimensions or levels of engagement and I will also consider styles of engagement. Also, when defining student engagement, a student can experience positive or negative engagement along a continuum with the middle space representing the students who are disengaged.

The following is a definition of student engagement proposed by the higher education academy.

*“Student engagement is concerned with the interaction between the time, effort and other relevant resources invested by both students and their institutions intended to optimise the student experience and enhance the learning outcomes and development of students and the performance, and reputation of the institution.”(Trowler and Trowler 2010: 2).*

This definition considers student engagement as a partnership between the student and the educational institutes with the potential for positive outcomes both for the student and the institute.

### ***PHILOSOPHY OF STUDENT ENGAGEMENT***

There are two models of student engagement, the market model of student engagement and the developmental model of student engagement. Firstly the market model of engagement with an emphasis on consumer rights, hearing the consumer voice and enhancing institutional market position.

Secondly, the alternative developmental model sees the students as partners in a learning community, which is constructivist with the co-creation of knowledge and an emphasis on student growth and a quality of learning which can be derived from engaging with a community of scholars. The developmental model places emphasis on student growth and development with the primary concerns of the quality of learning and the personal mutual and social benefits of engagement. Answering the key questions will assist the change agent in focusing on the most relevant ideology (Trowler and Trowler 2010, Trowler and Trowler 2011).

### ***DIMENSIONS OF STUDENT ENGAGEMENT***

The literature (Harper and Quaye 2009) defines dimensions of engagement, where students can be engaged behaviourally, emotionally or cognitively. Using three components is valuable as it offers richer characterisation than single components (Fredricks et al. 2004). Behaviourally engaged students conform to behavioural norms such as attendance, conduct and on-task behaviour and do not demonstrate disruptive or negative behaviour. This could be a symptom of just compliance or involvement without full engagement. Students who are emotionally engaged experience affective reactions such as interest, enjoyment, or a sense of belonging. Students who are cognitively engaged are investing in their learning; they would go beyond the requirements and relish the challenge. They have motivational goals and self-regulated learning (Fredricks et al. 2004). Students therefore can be engaged positively on a continuum from cognitive engagement to negatively demonstrating active

conflict. I have summarised the student engagement continuum in figure 4 below. This figure is a single dimension view of the student engagement continuum.

Student Engagement Continuum.						
Active Conflict	Withdrawal	Passive Apathy	Neither engaged or dis-engaged	Behaviorally Engaged	Emotionally Engaged	Cognitively Engaged

**FIGURE 4: STUDENT ENGAGEMENT CONTINUUM**

However an alternative multi-dimensional view of engagement is offered by Trowler (2014) where there are three dimensions and three poles.

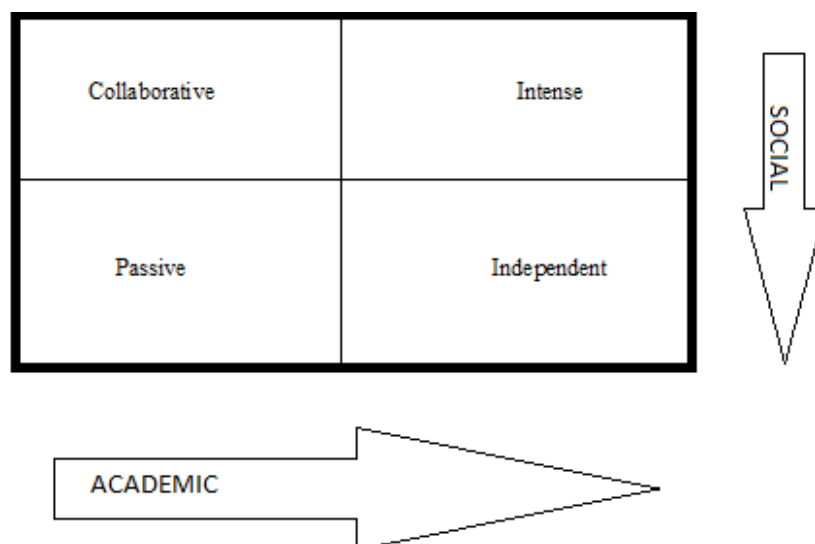
	Congruent Engagement	Disengagement	Oppositional Engagement
<b>Affective</b>	Interest, identification	Boredom	Challenge, rejection
<b>Behavioural</b>	Attends class, participates with enthusiasm	Skips class without excuse	Boycotts, pickets, or disrupts class
<b>Cognitive</b>	Meets or exceeds assignment requirements	Assignments late, rushed, or absent	Redefines parameters for assignments.

**FIGURE 5: MULTIPLE DIMENSIONS OF STUDENT ENGAGEMENT (TROWLER 2014: 9)**

## **ENGAGEMENT STYLES**

Coates (2007) identified four student engagement styles which he represented in a two axis (Social and Academic) grid. The four styles are Intense, Independent, Collaborative and Passive. It was noted that these states are not enduring, rather transient states or types. These styles are charted (in figure 5) on two axes, social and academic, which reflect the importance of the student's engagement both at an academic and social level.

As engagement styles are transient, there is the opportunity for the educational institution working with the student to manipulate the style to the best advantage of the student, and, indeed the institute. Programme design can have a collaborative style in the earlier years and moving to a more individual, independent style as the programme moves to the award stage.



**FIGURE 6: STUDENT ENGAGEMENT STYLES (COATES 2007)**

Coates therefore has identified two components to the student engagement style, social and academic. This also supports model of Terenzini and Reason (2005) as shown in figure 2. Their model identifies three components of student experiences that comprise of the college experience. These are classroom experience, out of class experiences and curricular experiences. These highlight not only the importance of the academic experience but also the out of class experience to build capital and ability.

Coates has also identified that social and academic traits impact on student disposition or engagement (Coates 2007). Social and academic components are therefore important in both the student engagement styles model and the model of influences on student learning and experience. Terenzini and Reason (2005) in their model include the organisational context which may include the engagement style of the institute and on the organisational context. These two different papers outline the importance of the student's social and academic attributes from the different perspectives of student engagement and learning and persistence.

### ***THE RESPONSIBILITY FOR STUDENT ENGAGEMENT***

Another topic that is common in the literature is the responsibility for student engagement. There are differences between the authors as to where this responsibility lies. Kuh sees the responsibility for engagement as a joint responsibility of the institute and the student:-

*“Student engagement represents the time and effort students devote to activities that are empirically linked to desired outcomes of college and what institutions do to induce students to participate in these activities”*  
(Kuh 2009:P 683).

This suggests that the institute has a role in inducing students to engage, while Coates broadens the responsibility to include staff involvement in the institution.

*“Learning is seen as a joint proposition which also depends on institutes and staff providing students with the conditions, opportunities and expectations to become involved”* (Coates 2005: 26).

This supports the view that capital can be transferred with the co-operation of staff and the support of the institute and the willingness of the student. Kezar expands on this suggesting that student success is a strategic issue and is embedded in the institutions mission, vision and philosophy, where all members of the campus community share responsibility for student learning and success (Kezar 2005). One distinctive characteristic of educationally effective institutions is that various groups share the responsibility for student learning and student success. But how is this sense of shared responsibility

achieved? A key condition seems to be that faculty, staff, and students are committed to their school's mission, vision, and philosophy (Kezar 2005). Further evidence that student engagement can be enhanced by taking deliberate and strategic actions is offered by Harper and Quaye (2009). The challenge to educational institutions is to foster productive, cognitive engagement through strategic intent, where all members of the institute commit to working together to achieve student success (Kezar 2005).

Educators and administrators must be strategic and intentional about fostering conditions that compel students to make the most of college both inside and outside the classroom (Harper and Quaye 2009). Strategic tools which can assist student engagement include using technology to support greater communication and collaboration between students and faculty outside class time. Strategic inclusion of online components into campus-based courses gives staff the means to augment their overall teaching by leveraging students' out-of-class time for learning, creating beyond-class conversations with students, managing assessments, setting frameworks and expectations for learning, contextualising learning experiences in terms of broader debates, and responding in a more adaptive way to the needs of individual learners (Coates 2007).

Staff education on the importance of student engagement is key. Staff need to understand the impact of their engagement styles on student success. This understanding should lead to staff adopting a more proactive engagement style to facilitate student engagement and allow the transfer of capital to students through empathy (Zembylas 2007).

The role of institutional leadership is important, and must be transformational, fostering capacity development and higher levels of institutional commitment to organisational goals which place student success and engagement appropriate to the student body as a key priority.



## ***HOW TO FOSTER POSITIVE STUDENT ENGAGEMENT***

There are a number of factors which contribute to positive student engagement. Collaboration between staff and students must be supported by institute policies and practices. This collaboration encourages activities, teaching, technology and support of students. To be successful these policies and practices must be embedded strategically within the organisation and be seen to have value and be supported.

Coates (2007) who has written extensively on the topic of student engagement describes both the academic and non-academic aspects of student experience, describing an active and collaborative learning environment with challenging activities, formative communication with staff and an enriching educational experience, supported by the university learning community. In addition to student engagement, the policies and practices that institutes use to encourage students to take part in these activities, touching on teaching, support the student experience and learners lives outside of university (Kuh 2003).

Therefore, the entire student engagement experience, both socially and academically, is important and students should be given the opportunity to engage academically and socially building their social and cultural capital. This allows the staff to facilitate a transformation of the institute's capital resources to increasing the social capital of the students and leading to increased ability of the students.

This understanding that student engagement has an academic and social component forms the basis of the NSSE in the United States (US) and Canada. The Australasian survey of student engagement (AUSSE) measures student involvement in conditions and activities likely to generate high quality learning. The AUSSE is very similar to the NSSE with the addition of the integration of employment focused work experience into the study using the work integrated learning scale to measure the work-readiness of graduates (Coates 2010). Both student cohorts in this study have work placement components. However these are in the later years.

A similar survey in the UK has a reduced question set, but seeks to measure student engagement with their learning and is a key measure of student satisfaction and a catalyst for driving improvement (HEFCE 2014).

Coates (2007) proposed that information technology systems developed to support distance learning programmes could be used in mainstream programmes to support communication and collaborative work between learners and their peers and academic staff. Such environments facilitated by information technology provide opportunities for students to have extra and richer conversations with staff, to participate in a greater range of complementary activities and, in particular, to engage in more collaborative work with their peers.

On-going analysis of patterns in student engagement would be necessary to guide and measure the extent to which on-line systems are being used in ways that augment campus-based study (Coates 2007). There are also opportunities for students to engage with social media technologies not provided by the institute and this is to be encouraged. Usage of on-line tools can, therefore, have a positive impact on student engagement and increase communications and augment face-to-face study. However, some disciplines are more suited to the use of on-line tools than others, and certain cohorts of staff and students depending on background are more likely to engage in on-line tools.

Trowler and Trowler (2010) outlined a framework for action which included issues of structure and process including governance, student feedback and student representation. Issues such as identity, engagement towards individual student belonging, identity attached to representation and engagement of specific groups such as non-traditional students. They outline a number of key questions which help the change agent understand their own context for implementation as well as the approach to student engagement they wish to foster. Next, the change agent has to consider their institution and the

primary purpose of focusing on student engagement-, - is it the need to market the institution or a concern about enhancing the quality of teaching and learning.

### ***MEASUREMENT OF STUDENT ENGAGEMENT***

While there are no tools for measuring student engagement currently in use in ITS, an examination of best practice in measurement is required to determine a suitable model for measuring student engagement in the Institute. Key to measuring student engagement is an understanding of learning styles and student outcomes as a result of engagement in higher education.

At a national level, student engagement surveys are at a pilot stage and it is likely that it will be several years before this is embedded across the sector and provide useful information. The target groups for the 2014 survey were first year and final year undergraduate and taught postgraduate students. In the pilot implementation of the Irish national student survey for ITS, the response rate was only 10% of the eligible cohort, compared to the highest response rate achieved by an institute of 40%. The level of responses in ITS would, therefore, mean that the survey would have limited usefulness unless there is more student engagement with the survey.

Two other measurement systems that are currently in use, as previously mentioned, are the NSSE and the AUSSE. The NSSE uses a college student report where students are surveyed on activities that support good educational practice. The NSSE measures US and Canadian students and, since 2000, more than 2.7 million students have completed the survey. In 2010 393,630 students and 761 institutions participated (Indiana University 2011). This survey gathers information on time devoted to study both in class and self-study, extra-curricular activities, employment and identifies collaborators in the students learning such as faculty and family. The respondents also record perceptions of their learning environment, the support provided by their institute and the relationship with faculty. This information is framed in the context of student personal circumstances. (Astin 1993). Other examples of measurement of student engagement include the AUSSE. The NSSE and

AUSSE would be similar but the latter has additional questions on the integration of work experience in the study.

Effective educational practices are where the faculty fosters an environment that encourages students to grasp the underlying meaning of information and gain a personal interest in the learning process. The interaction between the student and course structure, curriculum content and methods of teaching and assessment shapes whether the student will gravitate towards a surface or deep approach (Biggs 1989 in Nelson Laird et al. 2008). The challenge therefore is to achieve deep learning with students engaged in their educational process.

### ***ENGAGEMENT AND APPROACHES TO LEARNING***

Educational practices impact on the type of student engagement, where students can be engaged behaviourally, emotionally or cognitively (Fredricks et al. 2004). The learning style is a combination of the educational practices of the faculty and the interaction of the student. The best educational practices are ones which cognitively engage students.

However, as there is a range of student abilities present in the Institute, the educational practices must take into account the student attributes such as ability, socio-economic class and prior educational attainment. In the deep approach to learning the aim is that students understand the material, while in the surface approach to learning the aim is to reproduce material in an exam rather than understand it (Houghton 2004).

The lecturer can adopt either a surface approach to learning, emphasising the teacher, the content to be taught and the need to cover ground, or a deep approach to teaching where the emphasis shifts to the student and the learning environment, where the learning can be measured in qualitative rather than quantitative terms, the focus shifting from the teacher and classroom to the student and the wider environment (Knight and Trowler 2000).

The student's approach to learning can be modified by specific students' perceptions, such as the relevance of the learning task, the lecturers' attitudes and enthusiasm and the expected forms of assessment (Beattie IV et al. 1997). Using education strategies to alter students' perception can turn the learning situation from surface to a deep learning, causing the learning to be embedded.

Student assessment is key to encouraging deeper learning amongst students. Setting assessment tasks which cannot be answered with rote learning and require the student to be reflective and integrate data across a number of modules are key to encouraging deep learning amongst students. Giving student positive reinforcement and encouragement as they get feedback on their assessments is very important as negative feedback could encourage the students to revert to rote learning (Marton et al. 1984)

### ***STUDENT OUTCOME MEASURES***

Student outcomes refer to consequences for the student related to participation in higher education when compared to normal maturation, societal changes, or other influences or forces beyond postsecondary education's sphere of influence (Terenzini 1997). Student outcome measures therefore analyse the changes in the student as a result of participating in the educational system.

The student's experience changes in characteristics, knowledge, skills, attitudes, values, beliefs and behaviours as a result of attending college (Pascarella and Terenzini 2005). The impact of higher education is broader than equipping students with knowledge and skills. (Nelson Laird et al. 2008). Student outcomes include gains in the personal and intellectual development of the student. Measurable outcomes include the development of a personal code of values, contributing to welfare of the community, a deepened sense of spirituality, understanding yourself, understanding people from other backgrounds, solving complex real-world problems, voting in elections, learning effectively on your own, working effectively with others, writing clearly and effectively, speaking clearly and effectively, thinking critically and analytically, acquiring a broad education, acquiring work-related knowledge and skills,

analysing quantitative problems, using computing and Information Technology (IT) (Nelson Laird et al. 2008).

Laird et al used two questions to evaluate the student's satisfaction with their institution. The respondents were asked to evaluate their entire educational experience and were also asked if they could start over again would they go to the same institution they were now attending? (Nelson Laird et al. 2008). This question also is a measure of institutional commitment. In the study, I will explore satisfaction with the Institute, institutional commitment and goal commitment, which is the students' satisfaction with the programme of study.

### ***SELF-REPORTED OUTCOMES***

While the literature does not agree on the usefulness of self-reported information on average grades, Nelson et al reported that self-reported grades correlate well with actual grades (Nelson Laird et al. 2008). However, Pike, (1995) when researching self-reported grades, concluded that there was strong evidence of convergence only in the mathematical domain. In the social sciences, there was no significant evidence of convergence between the students' reported academic performance and actual performance (Pike 1995). This study will include both self-reported and actual student grades to overcome these concerns.

### ***LEARNING STYLES***

Learning styles originated in the work of a research group from Gothenburg University led by Ference Marton. His original work investigated how students read academic articles, looking at the level of understanding and seeking to find differences in how students came to terms with the task. Students had different levels of processing and approached the reading task in either a deep or surface approach, depending on the purpose in reading and conceptions of everyday knowledge (Marton et al. 1984).

### ***DEEP LEARNING VERSUS SURFACE LEARNING***

Deep learning reflects the personal commitment of the learner to understanding the material using various strategies. Surface learning focuses on the substance of the information with the goal of studying for a test or examination to avoid failure rather than grasping key concepts and understanding their relation to other information (Nelson Laird et al. 2008).

### ***STRATEGIC APPROACH TO LEARNING***

Subsequent research has shown that the quality of studying depends on both teaching and assessment and students have their own study contract which decides how much effort is put into different aspects of study with the objective of achieving the highest possible grades. Approaches to learning can, therefore, be defined on a continuum from surface approach where the objective is to reproduce information to meet course requirements, deep approach where the intention is to transform information in order to understand ideas, and the strategic approach where the aim is to organise information with the aim of achieving the highest possible grades (Marton et al. 1984).

Surface learning can be characterised by rote learning and students may default to rote or surface learning as a consequence of failure where substantially correct material which lack the verbatim responses some lecturers require and, as a result, attract no credit. This leads to a lack of confidence or anxiety in the ability to learn meaningfully and the only alternative to panic is rote learning.

### ***ELEMENTS OF DEEP APPROACHES TO LEARNING***

A reliable measure of student participation can be achieved by measuring the participation in three subscales of behaviours and combining these measures to a combined score. (Nelson Laird et al. 2008) The NSSE survey uses the following to measure student participation and type of learning which the student has experienced. High order learning requires analysis of the basic elements of an idea, synthesising and organising ideas into new and more complex interpretations and relationships, making judgements about the value

of information and applying theory or concepts to practical problems or in new situations (Nelson Laird et al. 2008).

Additionally the faculty engagement style will support a predominantly deep or surface approach. Becher and Trowler (2001) believe that the characteristics of the subject matter and the disciplinary grouping of the academic staff impact on the learning style of the student.

Deep learning may be integrative or reflective. Integrative learning requires integrating ideas or information from various sources, inclusion of diverse perspectives in class discussions and assignments, putting together ideas from different modules when completing assignments or, during class discussions, discussing ideas from readings outside class (Nelson Laird et al. 2008).

Reflective learning requires examining the strengths and weaknesses of own views on a topic, trying to understand someone else's view by imagining the issue from their perspective, learning something that changes the way you understand an issue or concept. (Nelson Laird et al. 2008).

### ***CRITICISMS OF LEARNING STYLES***

There are over four decades of research into learning styles from many different perspectives. Debates include whether student learning style is stable over time, (structural) or changing with each situation (process), preferences such as where students have a preference for one method of teaching, for example group work over independent study. The taxonomy of learning styles considers aspects such as instructional preference, social interaction, and information processing, cognitive personality, personality centred, cognitive centred and learning centred approaches.

The most important conclusion is that there is a variation in what is learned. From gaining knowledge about how students comprehend we can get



information on the levels of outcome which is useful for teaching (Marton and Säljö 1976)

The next section deals with the disciplinary differences and outlines the disciplinary classifications that I use in my research and examines links between pedagogy and academic disciplines.

### ***INTRODUCTION TO THE DISCIPLINARY DIFFERENCES***

The student engagement literature highlights the importance of the learner's engagement with the curriculum, and the important effect of support that is received from the institute and the academic staff. Issues that impact on student engagement include type of educational programme and faculty to which the student was exposed (Astin 1993). Student engagement, therefore, is influenced by the student's faculty and faculty have different attributes based on discipline.

Becher and Trowler in their book *Academic Tribes and Territories* focus on academic differences with particular reference to research and elite universities. They offer a useful categorisation to identifying knowledge and disciplinary groupings based on a simplification of earlier work by Biglan (Becher and Trowler 2001). Becher and Trowler identified four knowledge and disciplinary groupings:-

- Pure Sciences (Hard-pure)
- Humanities (Soft Pure)
- Technologies (Hard Applied)
- Applied Social Sciences (Soft Applied)

In addition to the hard/soft and pure/applied disciplinary groupings outlined by Becher and Trowler, Biglan (1973) subdivided the hard/pure groupings into life/non-life systems. Becher and Trowler (2001) also discuss links between the pedagogy and the academic disciplines finding that, while teaching behaviours i.e. clarity, expressiveness and interaction with students vary by

discipline category, there are no disciplinary differences in terms of ratings by students. There are disciplinary differences in overall ratings of instructor effectiveness with those in humanities, fine arts and health-related professions rated more highly in general.

Academics' understanding of the disciplinary subject matter can be seen to influence the approach they take to teaching it. Approaches vary by discipline and academics in different disciplines place different emphasis on the goal of education between knowledge acquisition, knowledge application, and knowledge integration (Becher and Trowler 2001).

### ***SUMMARY STUDENT ENGAGEMENT***

Student engagement is a measure of the quality of effort that students devote to educational outcomes (Hu and Kuh 2002). Students can be engaged both positively and negatively and the cognitively engaged students encompass both the academic and non-academic aspects of student life, engaging with staff, involved in enriching educational activities supported by the institutes (Coates 2007). In addition to the positively engaged student, students can also be disengaged or negatively engaged where they are a disruptive influence. Engagement is not enduring, rather it is transient and can be changed. A positive college experience with positive student experiences leads to persistence (Terenzini and Reason 2005). The responsibility for engagement lies with the institute, its staff and the student.

Kezar (2005) expands the importance of engagement to that of a strategic issue embedded in the institutes vision, mission and strategy. Good engagement does not happen by accident. It is the result of a positive relationship between the learner, staff and the institute and this relationship is strategic, planned and reflected in the institute's strategic intent. The institutional leadership in this regard must be transformational, fostering capacity development, placing student success and engagement as a key priority.

The more academically and socially involved the students are, the more they will interact with other students and faculty and the more positively these interactions are viewed by the student, the more likely they are to be retained by the institution (Tinto 1998).

The social and cultural capital of the students and the match of this capital with peers and faculty are also important. Social or cultural differences between students and staff may impact on student engagement with faculty. Interaction with faculty is more important for females than males and may indicate a gender difference (Tinto 1975). Engagement may be particularly problematic for students from a lower socio-economic class as these may not have the confidence or cultural capital to engage with the system if they have a difficulty.

Engagement may also differ by discipline as there are identifiable pedagogical differences between disciplines. The greater the student's engagement in college, as measured by time and effort put into educationally purposeful activities, the more likely the student will persist (Reason 2009). Therefore, experiences both within and beyond the classroom impact on student retention. The attitudes and enthusiasm of the lecturers can modify the student's perception of the relevance of the task and expected assessment mode to instil deep learning in their students (Beattie IV et al. 1997).

There are many institutional factors which impact on student engagement including institutional setting and whether the student is in a residential or non-residential setting.

Based on the literature review I define student engagement as a measure of the quality of effort students devote to educationally purposeful, challenging and collaborative activities which actively and positively support the desired outcomes in partnership with the educational institute and its faculty. While it is desirable for engagement to be a positive experience, for some students' engagement can be a negative experience leading to disengaged and disaffected students. It is hypothesised that an institution can take action and

develop measures to support positive student engagement. Such measures can include strong governance, a focus on student feedback and genuine student representation, development of assessments that support deep learning and educational practices which take into account both the social and academic attributes of the students.

My definition recognises that there are three parties to student engagement - the student, the academic faculty and the institute. These themes will be further developed in the next section to understand the interplay between them and the attributes and behaviours necessary for successful engagement, with the aim of achieving improved student performance, achievement and increased retention rates.

## **2.5 REVIEW QUESTION THREE – WHAT FACTORS IMPACT ON STUDENT RETENTION?**

### ***INTRODUCTION***

Understanding the factors which can impact on student success will lead to a greater understanding on how the institute impacts the student. Among the factors which are considered are the institutional commitment of the student, defined as a student's overall satisfaction, sense of belonging, impression of educational quality, and willingness to attend the institution again (Strauss and Volkwein 2004).

In order to achieve the desired effects of education, the student must be sufficiently involved to apply sufficient effort and energy to successfully achieve the desired learning and development (Astin 1999). Pre-college characteristics are important predictors and, from an institutional perspective, high entry scores can be seen as automatically guaranteeing a successful programme (Astin 1991). Successful integration of the student into the academic and social structures of the institute requires the institute to be proactive in integrating students successfully.

The creation of a successful campus requires a climate which supports the optimal development of the student, where there is no prejudice and discrimination on social and ethnic background (Strauss and Volkwein 2004), with organisational variables such as institutional mission, campus size, organisational structure exerting influences on the student outcomes (Strauss and Volkwein 2004). These approaches fall under the research into student institute fit models and typical of this type of model is Pascarella and Terenzini's model (Pascarella and Terenzini 1991).

This thesis investigates the impact of the college experience on educational attainment and makes operational and strategic recommendations to improve student success and achieving Astin's (1991) vision of an institute that develops the talents and abilities of the students to the fullest extent. The objectives, therefore, are to understand the students better and using this understanding to drive system change to deliver an excellent institution. A key factor will be to understand the measures of institutional success that develop the talents and abilities of the students to the fullest extent.

There are two broad categories of approach to student retention and engagement with the student attributes such as prior educational attainment and social class on one hand and institutional attributes such as prejudice and discrimination, organisational structure and mission on the other. These attributes can be considered as a system with the educational institution having inputs within which the students are interacting with the institutional environment leading to outcomes which are engaging and retaining students.

Considering such a systems approach, Astin (1991) identifies that a key variable is how the institute measures its success. Ideally the primary measure of institutional success should be the success of the students. However, if the correct measures are not adopted, the policies and strategic directions of the institute may be such that the institute does not operate to maximise student success. The institute will adjust the system to maximise what it perceives as attaining the institute's definition of success. Astin proposes a measure of institute development which he calls "talent development". In this measure he

defines true excellence as the ability of the institute to have a positive influence on the student's intellectual and personal development and in this context he defines an excellent institute as one which develops the talents and abilities of the students to the fullest extent (Astin 1991). Implied in the talent development model are the institutional and staff attributes which support it.

In the context of this thesis, the impact of the college experience on student retention can be defined as having two components, the student and the institute. The student brings with him/her a range of social, cultural and economic capital with a prior educational attainment, and the educational institution also has a range of attributes which include mission, size and structure together with the attitudes and abilities of the staff that are the touch points of student engagement. At the interface between the student and the institute are the measures that the institute uses to define its success and that of its students, and how this success is measured.

The previous sections considered in isolation the academic and social factors that impacted on student retention. This simplified view is useful in considering the issues that impact on students. However, it is useful to consider in detail other factors which impact on student retention. These factors include the college environment in which the student operates.

### ***COLLEGE IMPACT MODELS***

This section will also consider a number of detailed models which explain the factors that impact on retention in more detail, offering differing views on the student and the impact of the educational environment.

#### ***TINTO'S STUDENT INTEGRATION MODEL***

This early model was developed in 1975 and consists of the academic and social integration of the student. Other characteristics consist of the student's family and pre-college background, which combine to give goal and institutional commitment. The student integrates academically and socially into the

institute, leading to goal and institutional commitment. Students who do not have this commitment are in danger of dropping out from the institute. Sufficiently high levels of institutional commitment in the absence of a high level of goal commitment may lead to the phenomenon of getting by (Tinto 1975).

Tinto (1975) proposed a number of characteristics of an individual that are shown to be related to dropout. He argued that the family's socio-economic status appears to be inversely related to dropout and that college persisters are more likely to come from families whose parents are more educated, are more urbane and are more affluent. The quality of relationships within the family, the interests and expectations of parents all impact on student persistence. In terms of individual characteristics, measured ability assessed by grade performance in second level education is an important measure because it corresponds to an individual's ability to succeed in an educational setting. Dropouts also tend to be more impulsive and lack deep emotional commitment to education.

Second level education characteristics are also important as they affect the commitment to goal of college completion. The commitment to completion is a reflection of a multi-dimensional process of interactions between the individual, their family and prior experiences in schooling.

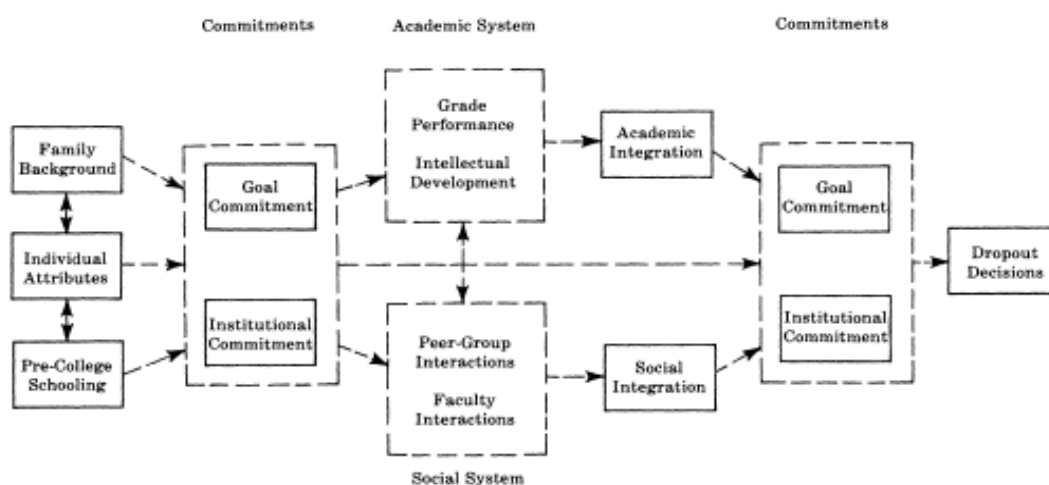


FIGURE 7: CONCEPTUAL SCHEMA FOR DROPOUT FROM COLLEGE (TINTO 1975: 95)

In addition to the pre-college characteristics, dropout is the outcome of a longitudinal process of interaction between the individual and the institution. This interaction may lead to a re-evaluation and modification of goal and institutional commitment (Tinto 1975). Important features of successful integration include academic and social integration (Figure 7).

Academic integration leads to improvement in grade performance and intellectual development during college years. Grade performance is the single most important factor in predicting persistence and grade performance also reflects both the person's ability and the institution's preference for particular academic behaviour (Tinto 1975).

Also of importance is the student's social integration. Students who establish friendships with other students are less likely to drop out, particularly if these friends have strong academic orientations. Other interactions that have a positive influence are interaction with faculty, administration staff and extra-curricular activities. These interactions increase the student's institutional commitment and for students with low goal commitment social integration may be the difference between persistence and dropout (Tinto 1975).

Characteristics of the institute such as resources, facilities, organisational structures and members lead to academic and social climates with which the student must come to grips. For example, in the US, two year colleges have higher dropout rates and if persons from high income families are enrolled in two year colleges it is likely that the student has lower ability and motivational levels. Higher quality institutions have higher graduation rates when using college income per student and numbers of staff with doctorates as a measure of quality.

*“Specifically, the higher the average ability of the student body, the lower will be the grades of individuals of given ability relative to the grades of persons of similar ability in institutions with students of lower average ability. Since grades are, in turn, related both to one's expectations for future education attainment and to the probability of dropping out, it*



*follows that the higher the ability level of one's peers, the lower will be one's expectations and the greater will be the probability of dropping out" (Tinto 1975: 114).*

And, for weaker students, dropout rates are higher in high quality institutions. There are various contradictory studies regarding size and student success when there are no controls for other factors. Small institutes may be more successful as there may be more opportunities for staff/student interaction, while larger institutes may be successful as they provide a wider variety of student subcultures, offering more opportunities for student-student interaction.

While Tinto's model has been generally validated by considerable research, additional research, particularly of non-standard students such as part-time or non-residential, suggest other variables, including students' initial educational objectives and intentions, support received from family, peers and employers with the integration of the students' academic life and their extra-institutional life. Dropout may occur when students exceed personal thresholds such as workload, difficulty and fees, where their studies have not properly integrated with their lifestyles (Tresman 2002)

### ***ASTIN'S THEORY OF INVOLVEMENT***

Another useful model to consider is Astin's input–environment–outcome (I-E-O) model. This model is related to Tinto's integration hypothesis and focuses on the "intensity of involvement" in the social and academic life of the college community (Smith and Naylor 2001).

This is one of the first and influential and most durable impact models (Pascarella and Terenzini 2005). Astin's model considers three elements - inputs, environment and outcomes. The inputs would be similar to the pre-college characteristics in (Pascarella and Terenzini 2005). However, the outcome of the education process would be the knowledge, skills, attitudes, values, beliefs and behaviours that students would exhibit after leaving college. These outcomes would be influenced by the college environment that is the people, programmes, policies, cultures and experiences that students encounter in college. This model describes a rich palate of influences on

student outcomes (Astin and Antonio 2012). In Astin's model, the environment provides some useful clues to examine the students in ITS.

Building on this work, Astin proposed a "theory of involvement". This theory can be stated as simply students learn by becoming involved (Pascarella and Terenzini 2005) and the greater the students' involvement, the greater the amount of student learning and personal development (Astin 1999). The theory of involvement is based on five basic hypotheses (Astin 1999). Involvement requires investment by the student of psychological and physical energy in different objects, these different students will invest varying amounts of energy in different objects and that this involvement is both qualitative and quantitative. The amount of learning and development is directly proportional to the quality and quantity of involvement and the educational effectiveness of any policy or practice is related to its capacity to induce student involvement. These last two propositions are the key to designing effective educational programmes for students and learning is more than just exposing students to a particular set of courses, rather it is the nature of the students' engagement with the learning that is the key to student success (Astin 1999).

#### **BEAN'S STUDENT ATTRITION MODEL**

A comprehensive student model was presented by Bean in 1980. Unlike previous models, he used path analytical techniques to check causal linkages. He based his study on previous work used in employee turnover in organisations. His model used the dependent variable dropout and the independent variables: satisfaction, institutional commitment and organisational determinants, believing that organisational determinants are expected to impact on satisfaction which in turn influenced dropout (Bean 1980). Bean identified different characteristics of men who dropped out when compared with women as follows:-

*"One may characterize a man who dropped out as follows: The student was not committed to the institution, did not have a high university GPA, was satisfied with being a student, did not believe that the education he received was leading to his development, found his life repetitive, did*

*not know the social and academic rules of the institution, and may have lived with his parents.” (Bean 1980: 183).*

Bean characterised a woman who dropped out as follows:

*“The student was not committed to the institution, did not perform well in high school, did not belong to campus organisations, did not believe that going to college would lead to employment, perceived an opportunity to transfer, did not believe that education leads to self-development, did not find daily life at college repetitive, was not committed to getting a bachelor’s degree, was not satisfied with being a student at the institution, knew the social and academic rules of the institution, did not participate in decision making, did not feel that she was being treated fairly, and did not meet with staff and faculty members informally” (Bean 1980: 184).*

Bean, from the quotations above, has identified that men and women leave university for different reasons, with institutional commitment the most important variable for both sexes. However, men left university even though they were satisfied, while women who were satisfied were more committed to the institution and less likely to leave.

### **UNITED KINGDOM (UK) STUDIES**

In addition to the literature from Tinto, Astin and Bean which is from the US, there is also research from the UK which deals with the relationships between the student and their institute. Non-completion has been the focus of much more analysis in the US than the UK, with a non-completion rate of 37% in the US when compared with a non-completion rate of 18% in the UK (Smith and Naylor 2001). There are differences between the UK and US in a number of respects including the student population in terms of age, ethnicity and socio-economic background. The influences on retention are complex and multifaceted, with the decision to withdraw taken over time and not taken lightly.

Three themes emerged as important - social support, problems with independent learning and a variety of material factors (Wilcox et al. 2005). This

is broadly similar to the US studies. However, Wilcox highlights the importance of social integration and the social support available to first year students and the importance of making compatible friends. This creates tensions as an old life and old friends are left behind and new friendships are made and, within this complex process, students need to “find their place” and the maintenance of these social bonds is crucial.

Problems in making compatible friends are tied up with the residential accommodation of the students and this causes particular challenges for mature students and students who live with their parents. Students who stay at home can feel marginalised, while, for new students, the challenges of sharing housing can be daunting. However, when faced with uncertainty, it was often people in their accommodation who provided emotional support. Students found the early introduction of a member of academic staff and a small group of students very helpful (Wilcox et al. 2005).

These findings were echoed in the Irish Survey of Student Engagement (ISSE) where 24% of students felt that the first year students felt they received “very little” support from the college to help them socialise. However, most students feel that they have good relationships with their lecturers with 62% of students reporting positive relationships with academic staff, and 82% felt that other students were friendly and supportive (Donnelly 2014).

Blanden and Machin (2004) found that with increased participation rates in higher education in the UK from 400,000 students in the 1960's to 2,000,000 at the turn of the century, this increase in educational opportunity is believed to offer potential for the advancement of students from poorer backgrounds. They have strong evidence that this expansion reinforces the inequalities in higher education finding that family income has displayed a closer association with degree attainment in more recent time periods.

The causes of this inequality were substantially accelerated by policy decisions where the cost of growth in participation were met by eroding student support

arrangements and the need for students to contribute to the cost of their education. This has implications not just for the current generation, but future generations as graduates earn more than non-graduates and that this gap has expanded over time leading to implications for intergenerational inequality (Blanden and Machin 2004).

Smith and Naylor (2001), using a large scale study to estimate the probability of student dropout, found evidence to support the relationship between dropout and prior academic preparedness and social integration at university. Additionally, they found an influence between unemployment in the county of prior residence, particularly for poorer male students, linking the opportunity cost of remaining in university and the probability of obtaining a job in the local labour market. They recommend that funding policies are devised to ensure financial support for poorer students.

#### ***FACTORS WHICH IMPACT ON STUDENT RETENTION FROM A REVIEW OF THE MODELS***

The models consider students as inputs with the students' educational achievements as outputs. The examination of the student inputs focuses on the students' prior educational attainment, their socio-economic or family background and individual attributes.. These inputs, when combined with the students' educational experience and their commitment, deliver certain outputs. These outputs measure the academic success or failure of the student and the models indicate actions that the institutes may or may not take to improve student outcomes.

#### ***PRIOR EDUCATIONAL ATTAINMENT***

Past grade performance demonstrates the ability to achieve within an educational setting. This can be measured by grade point average (GPA) or rank in high school class and the characteristics of high school attended which may be important in motivating students (Tinto 1975). Other factors from secondary school that are likely to impact on educational attainment are personal and social experiences and dispositions (Reason 2009). Astin (1985) notes that students are urged to apply by their parents, school teachers and guidance counsellors to institutions whose selectivity is comparable with the high school grades of the applicants, matching students to colleges where they

have some significant chance of being accepted and the ability of other students does not fall below their own.

In Ireland, students are assessed for a college place by the Central Applications Office (CAO<sup>1</sup>). The only criteria that the institute can use for student selection is setting the minimum CAO points required and other academic criteria, for example, a certain grade in mathematics or a language. The CAO applies a score to the student based on the results of the leaving certificate examination at the end of second level education, or based on other further education courses completed. Colleges use this score to control admission to courses.

Unlike the UK, for example, where the student's previous school or other factors can be considered, there are only two cases where the Institute is allowed to deviate from the offer of places on courses on merit based on CAO points. These special cases are mature students and students with a disability. If the student is a mature student or is availing of special consideration on grounds of a disability, this information is also recorded and available to the Institute. Mature applicants who are over 23 on January first of the calendar year they are admitted to an institution are offered an interview. If the student is successful at interview, the Institute assigns a CAO points score which will be used to offer the applicant the place. Students with a disability will also be interviewed and, if they are not mature students, the college can modify the entry requirements just for those students. Types of consideration may include reducing the number of CAO points required or waiving other course admission requirements. This interview gives the institute the opportunity to evaluate the student and assess the likelihood of completion. The interview may also provide information to the candidate and reaffirm their choice to enter higher education.

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<sup>1</sup>The CAO points are calculated based on the score in the Leaving Certificate Examination which is completed at the end of second level. The best **6 subjects** are included and the score will range from 0 to 625. There are 25 bonus points for certain grades in higher level mathematics. It is the **Main criteria** for assessing students for admission and is the only criteria used for students under 23.

The Institute has an Access office which specifically supports mature students and students with a disability. When the applicant applies to the CAO, it selects their course choices in order of preference in a number of categories. Students get an offer on their highest preference for which they have the required points in each category. If a student does not meet the requirements they will not get an offer in that category. Each applicant can nominate up to ten courses under each category but, in general, applicants tend to be more focused, usually only selecting three to four courses.

### ***FAMILY BACKGROUND***

The socio-economic status (SES) of the family is important because, all things being equal, children of higher status backgrounds have higher expectations than children of lower status backgrounds. However, when students from higher income families attend lower status colleges, they tend to have lower ability and motivational levels and perform worse than motivated students of lower income families (Tinto 1975). Therefore, income alone may not be enough to differentiate between different social statuses and may be unreliable. However, this view is not shared by all. Reason argues that SES was the second most powerful predictor of college retention behind high school grade point average, even when controlling for other factors (Reason 2009). The two most powerful predictors of student success, therefore, are prior educational attainment and socio-economic background. If SES is a predictor of success, the Institute has some way to go to mitigate the impact of SES in its student population.

### ***STUDENT AGE***

Mature Students can make their learning meaningful when this new learning can be linked to past experiences, opening new ways of looking at problems, transforming previous understandings, applying learning to real life contexts achieving “Authentic Evolvment” (Gilardi and Guglielmetti 2011). Older students are also more likely to have external commitments, with a pluralism of affiliations and involvements. The US Department of education has identified characteristics of non-traditional students, for example, a lone parent without a high school diploma (Gilardi and Guglielmetti 2011). These characteristics outline the challenges and responsibilities that mature students may have.

These factors indicate that mature students have greater challenges to overcome but the maturity may bring greater goal commitment.

It is likely, therefore, that mature students will bring higher levels of social and cultural capital to their studies which may impact positively on their success. This will lead to higher educational outcomes for mature students compared to younger students with similar educational and socio-economic attributes. Also, as mature students may be role models for other members of their families and communities, there could be important secondary benefits to successful student outcomes.

### ***ORGANISATIONAL CONTEXT***

The college experience is broadly conceived and consists of three sets of primary influences; the institute's internal organisational context, the peer environment, and ultimately the student's individual experience (Reason 2009). The organisation makes decisions regarding how it deploys the capital available to meet the strategic and operational objectives. This will be considered in detail later in this chapter.

### ***STUDENT INVOLVEMENT AND ENGAGEMENT***

The more academically and socially involved the students are, the more they will interact with other students and the faculty. The more positively these interactions are viewed by the student, the more likely they are to be retained by the institution (Tinto 1998). There are many institutional factors which impact on student engagement including institutional setting and whether the student is in a residential or non-residential setting. The social and cultural capital of the students and the match of this capital with peers and faculty is also important. Social or cultural differences between students and staff may impact on student engagement with faculty. This interaction (with faculty) is more important for females than males and may indicate a gender difference (Tinto 1975).



Engagement may be particularly problematic for students from a lower socio-economic class than lecturers. The students may not have the confidence or cultural capital to engage with the system if they have a difficulty, and, equally, the lecturer may not have sufficient relevant capital to positively engage with the student. The more students engage with or integrate into college life the more likely they will persist. Therefore, the greater the student's engagement in college, as measured by time and effort put into educationally purposeful activities, the more likely the student will persist (Reason 2009). Therefore, experiences both within and beyond the classroom impact on retention and the Institute should provide opportunities for students to engage both academically and socially with the institute, enhancing the social and cultural capital of the student in the habitus of their chosen educational institution.

### ***RESIDENTIAL VS NON-RESIDENTIAL INSTITUTIONS***

In a residential institution, the quality of a student's interaction with the college environment after enrolment is a more important factor in persistence than the characteristics with which the student enters (Pascarella et al. 1983). In particular, positive interaction with academic staff can aid persistence leading to increased social and academic integration (Tinto 1975). This outlines the importance of faculty and peer interaction and it is suggested that fewer opportunities exist in non-residential settings and, therefore, pre-enrolment factors have more of an impact on student success in non-residential settings. (Pascarella et al. 1983). Residential institutions also need to provide the opportunity for students to interact outside normal class hours. Vibrant clubs and societies, together with other opportunities for students to meet and form friendships which will sustain and support them through their studies, are vital. This also is confirmed by Tinto who observed that social integration via friendship and support is directly related to persistence in college. Social deviants are also less likely to drop out if they establish friendships with similar students or sub-cultures. College clubs and societies all have a role in providing social integration (Tinto 1975). There are, however, negatives associated with social interaction. Interaction with under-achievers can have a negative influence, while friendships with persons having strong academic orientations provide the opportunity for social and academic influences to coalesce (Tinto 1975).

In a non-resident institution, the student may fail to get sufficiently involved in the academic experience when compared with a student who is living on campus and fully involved in their programme. As the level of involvement decreases, so does the probability of completion (Astin 1985)

*“Students who live in residence halls have more time to get involved in all aspects of campus life....residential students have a better chance than do commuter students of developing a strong attachment to undergraduate life” (Astin 1999: 523).*

Wilcox et al (2005) also highlight the importance of social support and compatible friendships in achieving academic success with family and friends at home bridging the gap and providing a buffer against the stress of a new situation.

With the recent decline in the economy students are commuting rather than living on campus. It is necessary to consider ways of providing a good academic experience for these students with opportunity for capital building friendships.

### ***INSTITUTIONAL SIZE***

Smaller institutions in general have higher dropout rates than larger ones. This is because larger institutes have a wider variety of student sub-cultures catering for a greater variety of students. However, some very good smaller colleges might be equally effective with a lower staff to student ratio which may enhance persistence through increased student-faculty interaction (Tinto 1975).

### ***IMPORTANCE OF CAMPUS CLIMATE – PREJUDICE AND DISCRIMINATION***

As previously discussed, social integration through friendship and support is directly related to persistence in college (Tinto 1975). Where the institutional climate positively supports faculty-student interaction through academic and extra-curricular activities, in the absence of negative prejudice and discrimination, social integration is achieved, particularly if the staff to student

ratios are lower (Strauss and Volkwein 2004). There are examples of positive discrimination in selection and support where students from certain backgrounds are supported through funding and educational supports. An example in ITS would be the “Breaking the Mould” initiative, designed for students who have the ability to benefit and succeed in higher education but who may not have attended because of long-term unemployment, low family income or little or no tradition in progressing to higher education in their families or communities.

If there is insufficient social interaction, students may withdraw. However extra-curricular activities supported by the Institute and students union provide both the social and academic opportunities that heighten the student’s commitment to the institution, reducing the probability of drop-out (Tinto 1975). These activities combine with increased positive student/faculty interaction to increase the likelihood of students being retained. The interaction between students and faculty leading to an increase in student involvement is important:

*“Finding ways to encourage greater student involvement with faculty (and vice versa) could be a highly productive activity on most college campuses” (Astin 1999: 525).*

Therefore, the relationship between the faculty and learner is crucial and, while certain strategic decisions can be taken at institutional level to support this relationship, ultimately, it is the culture of the discipline that will have the most impact. The faculty, as the designers of learning activities and assessment tasks, have an impact on the learning approaches used by students. The field of study will influence the learners’ predominant learning style - deep or surface learning (Nelson Laird et al. 2008). As an example, faculty members from soft disciplines are more likely to encourage analysis and synthesis while the hard disciplines are more likely to require more memorisation and application of course concepts. Faculty in the soft disciplines are more likely to emphasise high expectations, encourage student faculty contact and active learning. Therefore, deep learning is more prevalent in soft disciplines and less frequent in hard disciplines (Nelson Laird et al. 2008). The assessment methods adapted are an important consideration as the format of assessment can encourage either deep or surface learning.

### ***ORGANISATIONAL CHARACTERISTICS, CAMPUS MISSION, WEALTH, COMPLEXITY***

How the institute deploys its resources, facilities and other structural arrangements may place limits on the development and integration of individuals and lead to the development of academic and social climates to which the individual must come to grips (Tinto 1975). Different types of institution have different dropout rates, with two year public institutions having the highest dropout while four year private institutions have the lowest. This is a factor of student selection, levels of motivation, academic ability, reinforcing inequality in the education system (Tinto 1975). Reason identifies other organisational factors including structure, the source of supports, size, curricular mission, admissions selectivity, organisational behaviour, culture, and climate, daily patterns of functioning, embedded and enduring patterns of organisational behaviour (Reason 2009). There tends to be a dominant organisational behaviour - bureaucratic, collegial, political, symbolic or systemic (Reason 2009).

The organisational characteristics of the institute impact on student and faculty interaction and may also impact on student – student interaction if a suitable environment supportive of this interaction is provided. Strauss and Volkwein (2004) have shown that there are only trivial indirect effects between institutional characteristics and academic outcomes. However, Reason (2009) considers that organisational effects such as policy on course sizes, promotion and tenure all impact on student retention. Policies that the institution adopts may influence the college experience and may have the unintended consequence of impacting either positively or negatively on student retention.

### ***RETENTION OR PERSISTENCE***

If the student has high goal commitment, but a low commitment to the institute, then the student may transfer to another institute where the student has a higher institutional commitment (Tinto 1975). In this case the student personally will persist to achieve his goals by transferring to a different institute and, therefore, will not be retained at the original institution. This demonstrates the difference between persistence and retention (Reason 2009).

Retention is an organisational phenomenon which means institutes retain students, while persistence is an individual phenomenon in that students persist to a goal, which may not be to graduate from college or to graduate from a different college. As this thesis is considering students from an institutional perspective, students will be measured on retention rather than persistence. Where students are retained there is a commitment by the student to the institute and harmony between the student and institutional objectives.

### ***MODEL FOR SUCCESSFUL STUDENT ENGAGEMENT***

Previously I defined student engagement as a measure of the quality of the effort students devote to educationally purposeful, challenging and collaborative activities which actively and positively support the desired outcomes in partnership with the educational institute and its faculty. While it is desirable for engagement to be a positive experience, for some students' engagement can be a negative experience leading to disengaged and disaffected students. An institution can support positive student engagement through strong governance, a focus on student feedback and genuine student representation, development of assessments that support deep learning with educational practices which take into account both the social and academic attributes of students, deployment of its resources to maximise the intellectual and social development of its students and faculty.

In answering review question two in the literature review I identified that there were three parties who could impact on student engagement - the student, the academic faculty and the institute.

In answering review question three, a number of factors that impact on student retention were revealed, many of which have roots in the pre-college characteristics and the interaction of the student with the college environment. This understanding of the factors that impact on student success can assist in devising institutional strategies and aligned departmental actions which will theoretically improve student retention. Student engagement and deep learning are components of successful student outcomes. Also empathy and

engagement between students and academic staff has the potential to increase the achievement of the students. When looking at the socio-economic profile of the cohort of students who are enrolled in Institute of Technology Sligo, consideration of the students' social and academic attributes are important. The conceptual schema which follows is an attempt to examine the attributes, responsibilities and motivations of the various actors which can impact on student retention.

The model proposed examines the roles of the faculty and the institute in fostering student motivation and engagement while taking into account the social and academic attributes that these students have. The model also recognises that institutional strategy, culture and values are important and are driven by both internal and external factors. The internal factors also include the faculty who also bring a set of attributes and attitudes which have the potential to influence student engagement.

### **SUMMARY**

This model combines a number of theories on how students are engaged with the institution. The model focuses on theories that examine the social and cultural factors in student engagement with a view to understanding how Bourdieu's theories on capital can be operationalised at the micro level. The aim of the model is to analyse how student engagement can be enhanced, leading to an increase in student motivation, which it is hypothesised, will lead to increased performance, achievement and retention. Many of the theories selected, such as Tinto's conceptual schema for dropout from college (1975) and Astin's input-environment-outcome model (1999), are based on the international literature, particularly literature from the United States where there is a body of research on underrepresented communities, in particular first generation learners who would have had similar characteristics with the enrolled cohort in the Institute of Technology, Sligo. When deciding on which literature should be included, cognisance was taken of the student attributes and the need to consider the students social and cultural capital.

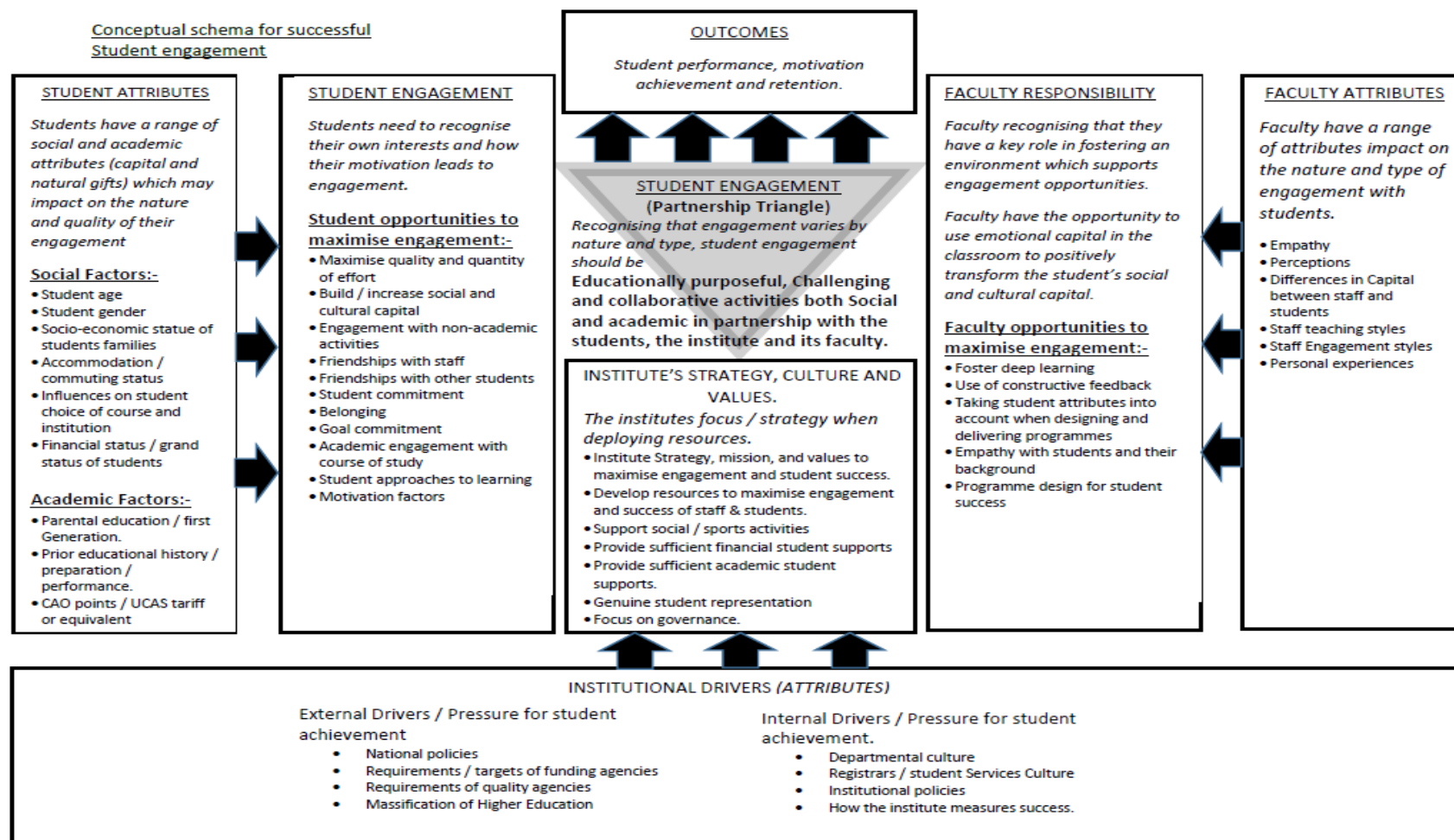


FIGURE 8: STUDENT ENGAGEMENT (PARTNERSHIP TRIANGLE)

## **2.6 REVIEW QUESTION FOUR – WHAT ARE THE STRATEGIC AND OPERATIONAL OPTIONS AVAILABLE TO THE INSTITUTE TO IMPROVE STUDENT RETENTION?**

### ***INTRODUCTION***

The college experience of the student depends on the attributes that the student brings to college and how the college understands its student attributes and delivers programmes suitable for the students with staff who have empathy for their students. To achieve an improved student learning experience and greater retention rates requires a commitment to student engagement which overcomes the disadvantages that students from lower SES bring to the institute, generally, lower prior academic performance, lower ability, and a shortfall of relevant social and cultural capital in the habitus of higher education. Therefore an appropriate response by the institute to these students can improve the impact of the institute and the success of its students. Institute responses include strategic and operational decisions which impact on student completion. Institutes can therefore make decisions which can impact positively and negatively on student success. The literature will be examined to consider actions that the institution can take to improve student retention. Engaging students positively leads to deeper learning with an improved educational experience, thereby fostering equality and impacting positively on student retention.

Astin (1985) defines the excellent educational institution as one which deploys its resources to effectively facilitate the intellectual and personal development of its students and staff. This is in comparison with what he believes is the traditional view of an excellent institution which is one where reputation and resources define excellence. This approach is called the talent development model and Astin believes that excellence is not limited to institutes with resources or reputation and any institution has the potential to be excellent if it deploys its resources to maximise student and staff personal and intellectual development. Astin (1985) has identified that there is both intellectual and educational development necessary for excellence in education. The literature review has highlighted the importance of both student demographics and prior academic preparation in determining the likelihood of success (Terenzini and



Reason 2005). Engagement styles also have an academic and social component (Coates 2007). This provides a useful perspective on examining student retention and engagement. The characteristics of students can be considered in terms of socio-economic background and prior educational attainment and, when characterised in this way, the issues they are likely to encounter and interventions that can be used to support students with particular attributes can be predicted.

### ***QUALITY ASSURANCE AGENCY FOR HIGHER EDUCATION (QAA)***

The UK code for higher education addresses student engagement in chapter B5. The code sets out that all students individually and collectively should be partners in the assurance and enhancement of their educational experience. The code tasks institutes with providing opportunities and the environment for effective student representation which is monitored and reviewed with the aim of improving the student educational experience and is supported by training and ongoing support with the aim of having informed discussions with students in evidence based discussions. The code points out that institutes are different and that each provider's definition of student engagement is likely to differ (QAA 2012). As ITS has no formal definition of student engagement, this is the first step in developing a formal engagement strategy. The development of institutional research structures to facilitate informed discussions with students would also be a priority.

### ***RESOURCE DEPLOYMENT***

Astin's (1985) approach, where students have educational and personal development needs, when considered against Tinto's (1975) model where he considers the pre-enrolment characteristics of family, individual attributes and pre-college schooling, and Terenzini and Reason's model (2005) which has as its inputs the pre-college characteristics of socio-demographic, academic preparation and student dispositions, leads to a consideration of the role of the excellent institution as being one that maximises the educational, social and cultural capital of its staff and students. This approach has implications for how an institute deploys its resources. In Astin's (1985) traditional view of excellence, where excellence is dependent on the total resources available to the institute, in the pursuit of excellence, institutes

*“Expend resources without generating more resources thereby depleting the total pool (Astin 1985: 55).*

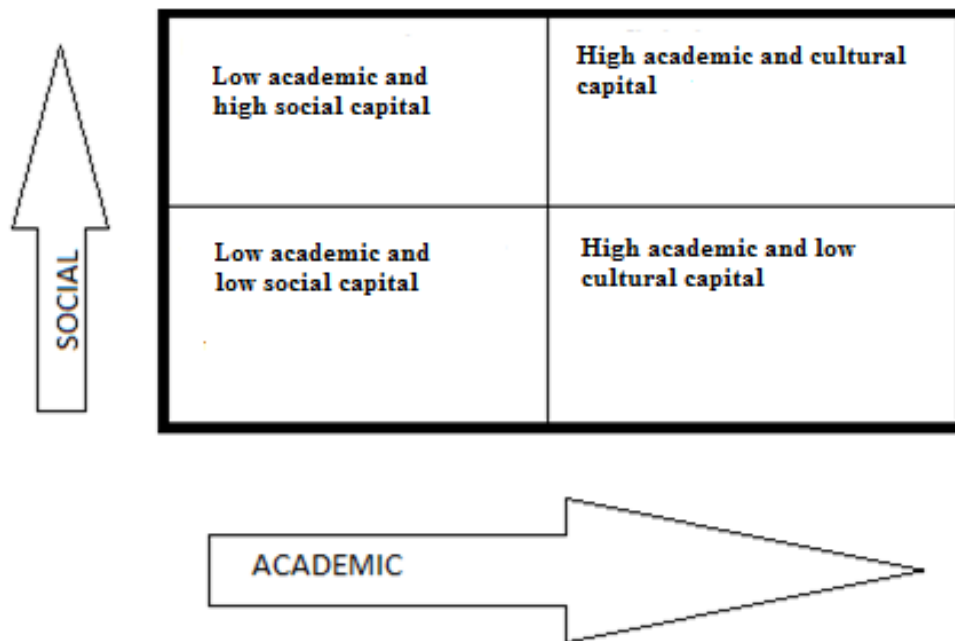
Redeploying resources to strengthen the academic programmes may improve and enhance the institute, leading to excellence and talent development (Astin 1985). The emphasis on resources also does not promote equity, as there is an over emphasis on selective admissions to recruit the top applicants and as an institute becomes more excellent it becomes more selective and less equitable, denying individual applicants the opportunity to avail themselves of education at a traditionally excellent institution (Astin 1985).

Using the talent development model, performance standards can be maintained and improved independent of admission standards provided one or more of the following occur. Either the under prepared students must be given more time to reach performance standards or a greater share of institutional resources must be deployed to deal effectively with under prepared students. If neither of the above occurs, the institutes failure rate and dropout rate is likely to increase. Lowering admission standards does not necessarily result in a lowering of performance, rather the institution must give the students more time and resources and develop the talent in these students (Astin 1985).

#### ***MODEL OF STUDENT CHARACTERISTICS, ISSUES AND INTERVENTIONS***

In addition to the student engagement - partnership triangle proposed previously, I have also developed a number of simple models which summarise the literature diagrammatically taking into account student characteristics (Figure 9) and where the impact of the social capital and academic capital can be estimated based on the students' characteristics, namely their academic profile measured by their prior educational attainment, and their social capital measured by parental socio-economic background. These models are developed to include likely student issues (Figure 10), and possible student interventions (Figure 11).

This simple model explains the capital characteristics students have based on their social and academic capital at entry. The excellent institute needs to understand the characteristics of students and, by applying a talent development model, recognising that resources are finite and deploying time and resources in an equitable and targeted manner to improve outcomes for all students.



**FIGURE 9: STUDENT CHARACTERISTICS**

Understanding the students from this perspective allows the institution to consider what operational and strategic changes it needs to make for the different categories of student. Understanding the volume of capital available to students will allow an understanding of any shortfalls which exist. Figure 9 considers these various categories of students.

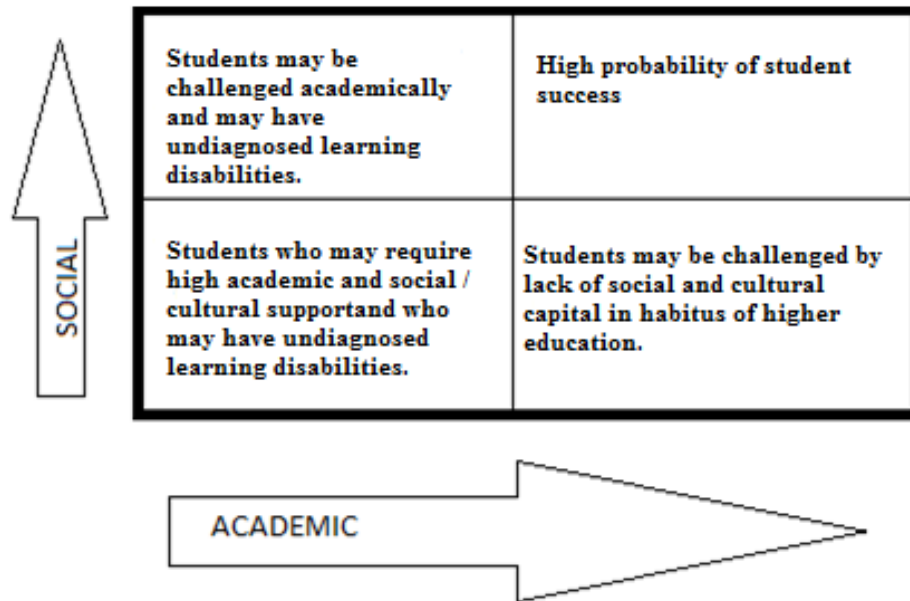


FIGURE 10: LIKELY STUDENT ISSUES

Figure 10 suggests the likely capital shortfalls that the institution must focus on. While the problem is explained very simply using quadrants, students are on a continuum on both axes. However, this approach is still useful in considering interventions.

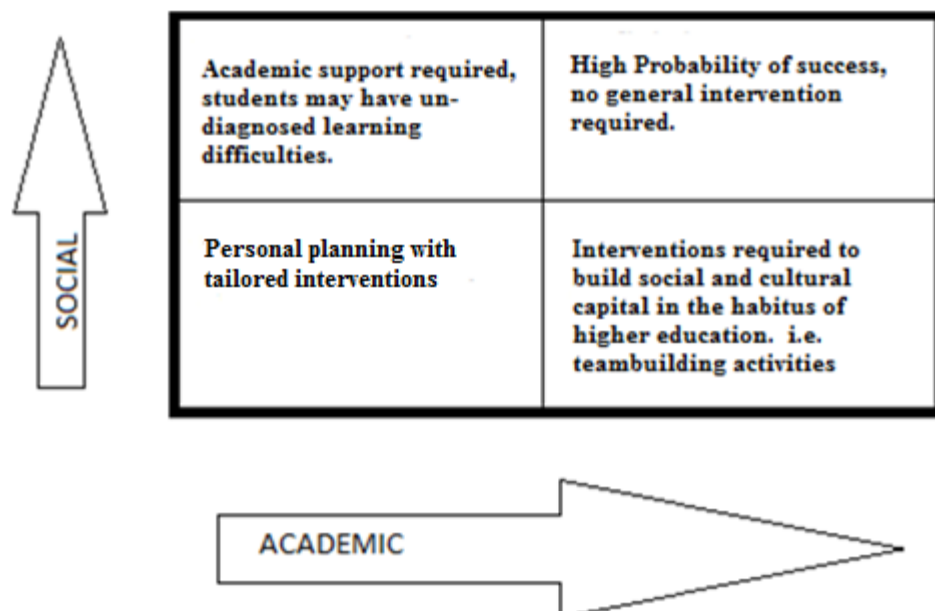


FIGURE 11: LIKELY STUDENT INTERVENTIONS

Figure 11 considers the supports that students require to benefit the most from education. Understanding the student is therefore key to planning successful interventions and institutional strategy. Understanding the student cohort and

their fit with the institute will allow the institute to make the correct interventions appropriate to the students on its programmes. Also recognising the diversity of learners who enter the institute can inform teaching and learning strategies making them more appropriate to the cohort of students.

## 2.7 RESEARCH QUESTIONS BASED ON REVIEW QUESTIONS

### *RESEARCH QUESTIONS*

Initially it is necessary to frame the research questions that will need to be answered under each of the four key review questions. A list of initial broad research questions that will be investigated is given below in Table 4.

**TABLE 4: RESEARCH QUESTIONS**

<b>Review Question</b>	<b>Theory</b>	<b>Research Questions</b>
<b>Characteristics</b> What are the student pre-college characteristics which impact on student retention?	Student Precollege Characteristics & Experiences Strategic Enrolment Management	<b><u>RQ1</u></b> What student pre-college characteristics impact on retention?
<b>Engagement</b> What is meant by student engagement?	The College Experience, Student engagement, student impact models.	<b><u>RQ2</u></b> What post entry factors impact on student retention?
<b>Outcome Strategy</b> What factors impact on student retention?	Retention Strategic Issues	<b><u>RQ3</u></b> What strategy can the college deploy to improve student retention, and can this be tailored to the student/programme characteristics?
<b>Outcome Operational</b> What are the strategic and operational options available to the institute to improve student retention?	Retention Operational Issues	<b><u>RQ4</u></b> Operationally what can the college deploy to improve student retention?

- **Research Question One (RQ1)** - What student pre-college characteristics impact on retention?
- **Research Question Two (RQ2)** - What post entry factors impact on student retention?
- **Research Question Three (RQ3)** - What strategy can the college deploy to improve student retention, and can this be tailored to the student/programme characteristics?
- **Research Question Four (RQ4)** - Operationally what can the college deploy to improve student retention?

The research questions consider the characteristics of students that impact on retention which may give insight into students at risk, and also the current actions of the institute which impact on student retention. The actions that the institute can take should be both at the strategic and operational levels and be done through a co-ordinated approach across the institute to improve student retention and student satisfaction, and monitor how the strategy is implemented in the academic departments. This should lead to targeted interventions which are appropriate to the students.

#### ***CONTRIBUTION OF THE STUDY***

Research on student retention and the student experience is very limited in the Irish third level sector and most of the research is concentrated in the university sector. This study examines two cohorts of students who are enrolled in technical and non-technical disciplines in an Irish institute of technology. Furthermore, the understanding that this research will bring to the institute of technology sector will lead to a range of recommendations at departmental, institutional and sectorial level.

The study uses translational research which draws on basic research on the sociology of access and participation and applies this to issues such as the fit between the student's cultural capital and the Institute's values. The lack of fit with the institute's values, behaviours, what constitutes performance etc. helps with the understanding of issues such as student engagement and how successful students learn and are retained. The institute impacts on the

student experience by shaping the allocation of the institute's resources consistent with their measure of performance.

The research will investigate the feasibility of a proposed model: "Student Engagement – Partnership Triangle". This model tries to understand the drivers of positive student engagement and the roles which different actors have in the delivery of positive outcomes for the student that is improved student performance, achievement and retention.

This understanding will inform strategic and operational recommendations to help the Institute develop successful widening participation initiatives with student equality of opportunity regardless of SES and academic background. These recommendations, informed by the research, will further help to make recommendations which are appropriate to ITS and its students.

### **3 CHAPTER 3 – RESEARCH METHODS**

#### **3.1 INTRODUCTION**

This chapter sets out the context of the research, the rationale for the research strategy, the research design and the methodological approach taken, the data used and the justification for the research methods that were selected. The chapter concludes with a reflection on the issues encountered by the researcher while on the research journey.

This research is an example of practitioner research which was in part fulfilment of a professional doctorate, and was intended to have direct applied relevance to professional practice. With this more applied research the starting point was focused on a professional or applied problem or topic rather than the more theoretical or applied starting points which are more typical of university research (Punch 2009). While the research is based on a small scale study it may open the path to a number of larger projects. However, more importantly, the study was realistic in size and scope and has made an important contribution to the strategic and operational planning and development of the Institute, with sectorial recommendations.

An output from the literature review of the research is the “student engagement – partnership triangle” and this will be partially explored in this thesis.

#### ***REFLECTIONS***

Broadly, the study investigated the college experience and how students engage with the Institute, the impact on student performance, achievement and retention, building an understanding of the relationship between college experience and retention and understanding how the Institute can, through strategic and operational actions, positively engage students. This, in turn, leads to increased satisfaction and retention. A case study approach was taken looking at two student cohorts in an Irish Institute of Technology.



The study is longitudinal and examined in detail two different student cohorts at ITS - one group of students who joined the early childhood care and education course which traditionally has a strong performance in student retention and a cohort of students in computing which traditionally had a poor performance in student retention.

While the area of the student experience and student retention is well researched internationally, there is limited evidence of research carried out in the context of the institutes of technology sector in Ireland. Indeed, in the author's own institute there is very little institutional research on student experience, satisfaction and retention.

A recent report on progression rates in Irish higher education identified that the proportion of new entrants in 2007/08 who are not present one year later was 15%. This is an average across all sectors, disciplines and NFQ levels and against a background of increased participation in higher education in Ireland over recent decades. However, retention rates are generally poorer in the institute of technology sector, particularly at level six and seven on the NFQ where the number of new entrants not present in year two rises to 26%. This increases to over 50% when the students enter with less than 100 CAO points indicating that retention rates are linked to prior educational attainment and NFQ level (Mooney et al. 2010).

However, despite these difficulties, at present one-third of the Irish adult population (aged 25–64 years) have a higher education qualification—12% at NFQ levels six or seven and 22% at NFQ level eight or above (Mooney et al. 2010).

The students examined came to the Institute with a variety of prior academic performance and varied socio-economic backgrounds and a variety of social and cultural capital. The study measured changes in student perception, motivation and completion over their first academic year, and in the second

academic year qualitative data was gathered using focus groups, raising the understanding of answers to the research questions.

The research focused on 140 students who pursued level seven programmes in information technology (School of Engineering and Design) and 80 level eight early childhood care and education students (School of Business and Social Sciences). This sample addressed fears that the results may not be generalisable within the Institute as there was a mix of disciplines, level of study and entry requirements across the cohorts studied.

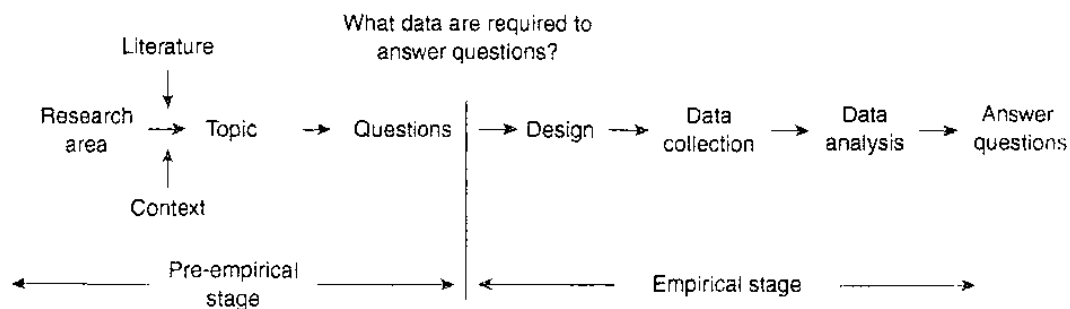
The students were all at the same institution from programmes with differing historic performance in student retention. The study followed the individual students over two academic years and also compared the students across the two cohorts to identify the reasons why the successful students' progressed and other students did not. The study contributed to the debate in the Institute on the value of and the need to resource robust institutional research to achieve increased student retention and gain strategic advantage through the use of evidence based decision-making.

This thesis is, therefore, an example of applied research which aims to provide knowledge that can be used in solving practical problems such as the low retention rates within the institute of technology sector, particularly where there are lower levels of prior educational attainment. The thesis also aims to deliver both strategic and operational recommendations that are useable by the Institute (Swanborn 2010).

The research was divided into two stages: the pre-empirical and the empirical stages. The pre-empirical stage generated the research questions through an analysis of the literature review in the context of the Institute. These research questions were based on a model that was developed from the literature review "Student engagement - partnership triangle"

When the research questions were identified, the empirical stage – the research methods with the aim of answering the research questions – was

formulated by selecting the methods that were to be used and the data that was to be collected and analysed (Figure 12).



**FIGURE 12: SIMPLIFIED MODEL OF RESEARCH (PUNCH 2009: 68)**

### **3.2 DEVELOPING THE RESEARCH QUESTIONS (PRE-EMPIRICAL STAGE)**

#### **OBJECTIVES**

The approach began with the core research question that needed to be addressed. The core research question was: -

**“How can student retention be improved at the Institute of Technology, Sligo?”**

From this core research question, four review questions guided the literature review. The findings from the literature review were used to identify four main research questions.

These review questions guided the literature review through the student lifecycle and gave focus to the literature review, providing a detailed structure. The review considered pre-college characteristics, the student experience, factors which impacted on retention and engagement and considered the relationship between engagement and retention, understanding strategic and operational options for improving the college experience and its impact on student retention. The literature review was summarised in the “student

engagement - partnership triangle” which was proposed as a model to improve student performance, achievement and retention.

From this detailed review of the literature four research areas were identified: student selection and recruitment, student engagement styles, institutional strategy, and operational issues at programme and departmental level. These research areas focus on sections of the student engagement - partnership triangle, the student, and the interaction with faculty and the institute from the student’s perspective.

The research questions were informed by the literature review with the aim of understanding the students’ college experience and how this had impacted on student retention. The research questions and model gave formal expression to the intellectual puzzle, that is, what pre- and post- enrolment factors impact on student retention and what actions can the Institute take both strategically and operationally to improve the student experience and enhance student retention (Blaikie 2009).

The objective in framing the research questions was to have questions that were both easily understood and unambiguous, and also interesting, worthwhile, worthy of the investment of research effort and incorporating concepts that were specific enough to connect to the data. The questions were connected to each other in a meaningful way with the matrix (Table 5) and focused on inputs and outputs with operational and strategic actions (Punch 2009).

The research questions were framed using Punch’s guidelines (Punch 2009) with clear, specific and answerable questions which were connected and mapped to operational and strategic actions. The questions were considered to be relevant as student retention is a major challenge for third level education internationally and specifically in Ireland as outlined in the literature review earlier. The research informed the Institute’s strategic and operational

decisions and the dissemination of the findings had local, regional and national impact.

The core research question was expanded into four subsidiary research questions which investigated the factors that impacted on student retention, identified in the student engagement - partnership triangle and proposed actions to improve student retention.

**TABLE 5: PRIMARY RESEARCH QUESTION, REVIEW AND RESEARCH QUESTIONS.**

<b><u>Primary Research Question</u></b> <b><i>“How can student retention be improved at the Institute of Technology, Sligo?”</i></b>	
<b><u>Review Question One.</u></b> What are the student pre-college characteristics which impact on student retention?	<b><u>Research Question One.</u></b> What student pre-college characteristics impact on retention?
<b><u>Review Question Two</u></b> What is meant by student engagement?	<b><u>Research Question Two.</u></b> What post entry factors impact on student retention?
<b><u>Review Question Three</u></b> What factors impact on student retention?	<b><u>Research Question Three.</u></b> What strategies can the college deploy to improve student retention, and can this be tailored to the student / programme characteristics?
<b><u>Review Question Four</u></b> What are the strategic and operational options available to the institute to improve student retention?	<b><u>Research Question Four.</u></b> Operationally what resources can the college deploy to improve student retention?

The research matrix (Table 6) shows how the research questions were mapped to operational and strategic actions based on the students’ pre-entry disposition and attributes and the desired student outcomes. The research questions investigated both pre-entry and post–entry factors which impacted on student retention and used these findings to better understand strategies and operational actions which could improve student retention.

**TABLE 6: RESEARCH MATRIX MAPPED QUESTIONS TO ACTIONS**

<b>Primary research question.</b>	<b><i>“How can student retention be improved at the Institute of Technology, Sligo?”</i></b>	
Research Questions	<b>Inputs</b>	<b>Outputs</b>
<b>Operational Actions</b>	<u>Research Question 2.</u> What post entry factors impact on student retention?	<u>Research Question 4.</u> Operationally what resources can the college deploy to improve student retention?
<b>Strategic Actions</b>	<u>Research Question 1.</u> What student pre-college characteristics impact on retention?	<u>Research Question 3.</u> What strategies can the college deploy to improve student retention, and can this be tailored to the student / programme characteristics?

### 3.3 RESEARCH DESIGN (EMPIRICAL STAGE)

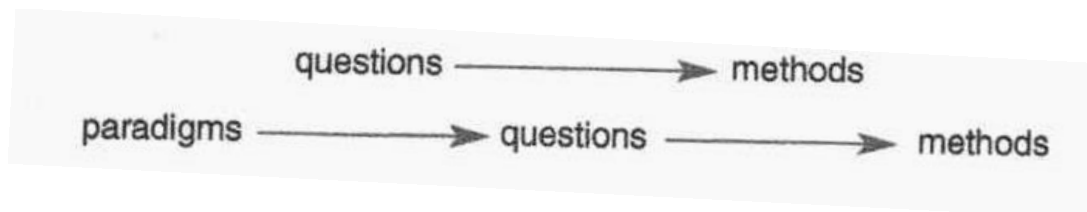
Once the research questions had been selected (pre-empirical stage), it was necessary to design the research to answer these questions. The empirical stage considers the research design, data collection and analysis methods necessary to answer the research questions.

#### **PARADIGM OR PRAGMATIC APPROACH**

When planning a piece of research it is necessary to ensure compatibility and integrity between the research question and the chosen methodological approach as shown in the top line of Figure 11. In this approach the researcher begins with the question and develops an appropriate method which ensures compatibility and integrity between the research question and the method.

An alternative approach is when the research paradigm is considered first, articulated and a research question and methods derive from it. This approach is outlined in the bottom line of Figure 12.

Therefore, there are two approaches which can be adopted - the paradigm driven approach, where the paradigm is the starting point, and the pragmatic approach, where the starting point is the research question (Punch 2009).



**FIGURE 13: PARADIGM DRIVEN AND PRAGMATIC APPROACH (PUNCH 2009: 19)**

In the paradigm driven approach the starting point is the research paradigm which is defined as an all-encompassing system of interrelated practice and thinking defining the nature of inquiry. It encompasses a research culture with sets of beliefs, values and assumptions and is a method of thinking about a subject and carrying out the research in a way that is acceptable to other researchers working in the area (Newby 2010).

In this thesis the focus is on using the student engagement - partnership triangle as a model to the reasons for the poor rates of progression, particularly for the students in institutes of technology, where non-presence rates for some students in their second year of study were over 50% (Mooney et al. 2010).

The model proposed builds on prior work on student engagement and retention. This prior work informed the research questions, which allowed the researcher to correctly understand the problems that needed a solution, propose a model, design the study, collect and analyse the data and write up the results (Edmondson and McManus 2007). While the research approach proposed above is a linear sequence (Cohen et al. 2011), rarely is the linearity so clear, with the research design evolving over time, and as new findings and insights are discovered. The surveys and questionnaires were delivered over two academic years and as each component was analysed this fed into the design of the next component as part of an evolutionary cycle.

Punch (2009) outlines a four-step model for organising educational research. The research is framed in terms of research questions which require data to answer questions. The data to answer the questions is determined and research is designed to collect and analyse the data, and this analysis answers the research question.

The research was organised around this model, and the literature review contributed to the development of the model which framed the research questions to answer the identified gaps in knowledge. The available secondary data was analysed and this was supplemented by primary data. This combined data was then analysed to answer the research questions.

Therefore, when considering the methodology to use it was also necessary to consider ontology and epistemology, the former being how the researcher saw the world and why, and the latter being the logical consequences of that for the researcher's own interpretation of the research questions, what one wants to know and how one will find out about it.

The view of the pragmatist is that the mandate of science is to not to find truth or reality, but to facilitate human problem solving, with the emphasis on choosing explanations which produce desired outcomes. Pragmatism considers the research question to be more important than either the method or underlying paradigm, recognising that it is essential to obtain corroborating evidence from a variety of sources. Methodological triangulation therefore facilitates problem solving and explanations (Pansiri 2005).

### ***RESEARCHER'S STANCE***

All research is based on certain assumptions about knowledge and how it is acquired, these assumptions influence the research design and selection of the methodology.



## **ONTOLOGY**

Ontology concerns the nature of reality and there two contrasting views - positivism and interpretivism. Educational research can be approached from two distinct traditions. On the one hand from the social science tradition and the effects of social structure on human behaviour and on the other hand from the scientific model which is the critical investigation of the presumed relationship amongst natural phenomena (Pring 2004).

### **Positivism**

The positivist approach which advocates that social reality can be studied using the methods of natural sciences (Bryman 2008). However, this renders any emotional involvement problematic as the research activity is considered to be unscientific. Positivist research carried out using statistical analysis and experimentation leads to control and predictability, assuming that a single objective reality exists independently of what individuals perceive and it can be objectively measured with detachment. This objectivity and detachment means that a single reality exists and eventually all inquiries will converge on the same objective reality and the overriding goal is the explanation and prediction of behaviour using universal laws (Hudson and Ozanne 1988). Thus, by its nature:-

*“Scientific explanation seems to be the only means of explaining behaviour, and, for them, this seriously diminishes the very characteristics that make humans human. It makes for a society without conscience. Positivism is unable to answer many interesting or important areas of life”* (Cohen et al. 2011: 15).

The belief that a single reality exists is problematic because a universal statement cannot be verified by a finite number of observations and, therefore, universal laws are unachievable (Hudson and Ozanne 1988). These criticisms of positivism call into question its usefulness as the sole approach when trying to explain human characteristics, particularly where emotions come into play. When investigating student retention, a positivist approach assumes that the effect of social structure on human behaviour is consistent and can be

measured scientifically. However, the best that can be achieved is a statistical generality which, because of the differences in human agents, means that scientific studies alone are problematic.

### **Interpretivism**

The alternative approach - interpretivism - recognises that social action has subjective meaning (Bryman 2012) and that the subject matters of the natural and social sciences are different (Blaikie 2007). In comparison to the positivist approach where reality exists independently of what individuals perceive, the interpretivism view is that the researcher interacts with the environment, making sense of it, becoming part of the environment and developing meaningful insights by interpreting experiences rather than merely measuring them. Multiple realities therefore exist because of different individual and group perspectives and because of these multiple realities it is not possible to predict behaviour but to understand it. For interpretivism this understanding is a never ending process where new understandings enter into current interpretations (Hudson and Ozanne 1988).

Both of these two alternative approaches have merit. However, the positivist approach is problematic as it assumes a single view of the world, independent of the actors. This approach favours quantitative research which can be analysed scientifically. However, the researchers' and subjects' involvement has the potential to distort the findings leading to at best statistical generality rather than being able to answer the research question.

The interpretative approach uses qualitative data which may introduce bias in the results and recognises that the interaction of the researcher with and in interpreting the environment is problematic because it creates multiple realities and two researchers examining the same phenomena may not reach the same conclusions.

## **Critical realism**

The critical realist is at the interface between the social and natural worlds and favours a mixed methods approach providing triangulation and reducing bias by integrating methods and data sources providing complementary insights into the same phenomena (Modell 2009). The combination of qualitative and quantitative data allows the positivist and interpretivism approach to contribute to the findings using triangulation to compare and contrast the results.

Critical realism (also known as social realism) considers that the objects of scientific enquiry are considered to exist and act independently of the scientists and their activity (Blaikie 2007), and that these events occur whether or not they are experienced. Structures and mechanisms produce these events, and these structures and mechanisms are independent of the events they produce and exist at a deeper level, and may counteract each other to produce no observable event (Blaikie 2009).

This research triangulates the findings of the qualitative and quantitative research, recognising that a single method may lead to an incomplete understanding of the phenomena and that a combination of methods gives justification to the phenomena and its comprehension (Cohen et al. 2011).

By using a combination of information types and sources it is possible to better understand the phenomena under investigation allowing the findings to be triangulated and give a more holistic approach to understanding the data. The challenge with triangulation is when there are discrepancies or contradictions and explaining these anomalies (Barbour 2007).

The combined methods used in this research allowed a breadth of quantitative information, supplemented with the depth of qualitative research. It takes the view that using qualitative and quantitative methods were complementary and that the two paradigms gain by no longer ignoring each other and increase the generalisability of the results, with both approaches being interrelated i.e. with

quantitative methods contributing to identification of relevant processes and qualitative research providing the basis for their “thick description” (Fielding and Schreier 2001). The critical realist ontology adopted defines evidence as work which can give insight into structures and helps to understand the concrete world of experience (Clegg 2005), and with the aim of not merely understanding situations and phenomena but to change them (Cohen et al. 2011)

### **Naturalistic inquiry**

The naturalist paradigm is useful for case study research and is tolerant of real world conditions, providing a contextual relevance and richness unmatched by other paradigms, and has four basic criteria for trustworthiness which will be considered in detail later (Guba and Lincoln 1982).

Similar to interpretivism the naturalist paradigm recognises that there are multiple realities which diverge leading to some level of understanding, while also recognising however that prediction and control are unlikely. The paradigm also recognises that the interaction between inquirer and object influence each other and that knowledge and is best encapsulated as a series of working hypotheses and the best that can be achieved is plausible inferences about the patterns shaping any given case (Guba and Lincoln 1982).

The search for knowledge as more knowledge is gained also leads to new unknowns and every inquiry raises more questions than answers. This is particularly true of focus groups and because of the interactivity between the researcher and the objects it is possible to hone in on relevant facts by virtue of sensitivity, responsiveness and adaptability and by using thick description it is possible to make judgements about generalisability. (Guba and Lincoln 1982)

### **Cause effect relationships**

There are different views on the relationship between cause and effect. Positivists believe that the concept of causation exists. The naturalist approach considers that there are multiple factors, some of which balance out others and

they prefer to think of multiple factors feeding backwards and forwards shaping one another. Therefore, the concept of causation is obsolete and unnecessary and the emphasis is on developing theory to explain data rather than searching the data to fit a theory (Guba and Lincoln 1982).

### **3.4 RESEARCH METHODS**

There are a number of research methodologies that could have been adopted for this research - qualitative, quantitative or mixed methods. Different methodologies mean the use different methods of data collection and analysis. Quantitative methods collect data that is numerically based and can be analysed using analytical methods such as statistical correlations and hypothesis testing. Qualitative methods rely on language and interpretation of its meaning and involve close human participation and is more a creative process of theory development rather than theory testing. Therefore, quantitative research tends to measure while qualitative research tends to describe (Walliman 2006). A mixed methods research strategy has both qualitative and quantitative elements.

#### ***QUANTITATIVE METHODOLOGY***

Quantitative research used a deductive approach to test theories, based on a positive approach inherent in the natural sciences and has an objectivist ontology where social reality is regarded as fact (Walliman 2006). The data is numerically based and can be scientifically analysed offering control and predictability at the expense of detachment from the objects of the study.

#### ***QUALITATIVE METHODOLOGY***

Qualitative research uses an inductive approach to generate theories. Rejecting positivism, it relies on individual interpretation of social reality and is constructionist in ontology where social reality is seen as a shifting product of perception (Walliman 2006). It seeks to unpick how people construct the world, what they are doing, what is happening to them in terms that which is meaningful and offers insight (Flick 2007). This methodology, therefore, analyses language and the interpretation of meaning.

### ***MIXED METHODS APPROACH***

A mixed methods research methodology was adopted for this study and recognised that contrasting quantitative and qualitative strategies were necessary. This method committed the researcher to two strategies each with different epistemological and ontological assumptions, which may be considered as polar opposites. Mixed method research can be used in certain circumstances; for example, the use of triangulation to cross check findings, conducting qualitative research to help explain findings derived from quantitative research , gleaning an appreciation of participants' perspectives and using differing strategies to answer different research questions (Bryman 2001).

This approach combines the advantages of both qualitative and quantitative research and allows data consolidation, correlation and comparison (Johnson and Onwuegbuzie 2004). A mixed methods research approach is useful where research of a practical nature has the objective of developing policy which is distinct from scientific research (Bergman 2008).

The mixed methods approach adopted was selected to give more detail to the quantitative results and combined with a longitudinal study with a dominant quantitative research strategy. This was followed by a qualitative research phase to better understand the participant's perspectives. The focus groups provided in-depth and extended answers to the questions and gave feedback and access to information that was not possible to obtain from the longitudinal surveys.

The mixed methods approach also allowed, in addition to triangulating the findings of the two phases of the research, the disadvantages of each approach to be overcome, and while not necessarily enhancing validity, it extended the scope and understanding of the research (Fielding and Schreier 2001).

This mixed methods approach provided information that gave it depth and context by a qualitative study which consisted of four focus groups based on a subset of the participants who were involved in the quantitative study. This combination of qualitative and quantitative research maximised the robustness of the research findings, where objectively measured variables were further clarified in ways that interpretative qualitative research can offer (Anderson and Poole 1998).

### **SAMPLING STRATEGY**

The research consisted of initially a quantitative longitudinal study of 264 students at ITS. This comprised over 20% of the September 2012 intake of first year students on the two programmes that recruited the largest cohort of students within the Institute - the BA (Hons) in early childhood care and education and the BSc in Computing.

This group were analysed using the data contained in the Institute's management information system such as prior educational attainment, parental socio-economic status, age, and student grant status and examination results.

### **SELECTION OF PROGRAMMES.**

Retention rates and completion rates vary by programmes in ITS, with poor retention below 30%, e.g., degree programmes in computing, while on other programmes the completion rate is much higher, e.g., degree programmes in social care. This research compares two cohorts of students, one from a programme that has a successful track record in retaining students and one which does not.

*"Students in Computer Science experience a much greater risk of dropout, while those enrolled in education and healthcare courses have significantly lower non-progression rates, even taking account of the gender, 'ability' and social class intake of these courses" (Mooney et al. 2010: 7)*

The literature review also finds that student engagement is influenced by the faculty and notes that faculty have different attributes based on discipline.

There is merit therefore in selecting programmes from different disciplines recognising that there are disciplinary differences in teaching behaviours (clarity, expressiveness and interaction with students vary by discipline), Instructor effectiveness (humanities, fine art and health related programmes performing high) and academic understanding (disciplinary subject matter can influence the approach taken to teach it) (Becher and Trowler 2001).

Programmes in the Institute tend to occupy the applied space rather than the pure space. The computing programmes (hard applied) and ECCE (soft applied) allow the researcher to understand the differences and impacts of hard and soft programmes in the analysis of the data. The disciplinary differences may impact on the approaches to learning and teaching (deep / surface) the learning style combination, the educational practices of the faculty and the interaction of the student.

*“Academics in different disciplines place differing stress on the goals of education between (1) knowledge acquisition, (2) knowledge application and (3) knowledge integration. Faculty in hard disciplines stress the second more than their colleagues; those in non-life soft fields stress the first and third more than colleagues in hard disciplines; faculty in life-systems hard and soft fields give the same weighting to these two goals. Teachers in some academic disciplines continue to stress simple transference of knowledge, despite the rhetorical emphasis in recent years on higher order skills.”* (Becher and Trowler 2001: 195)

It is to be expected therefore that academic staff on the computing programmes would value and measure knowledge application while the academic staff on the ECCE programmes would value and measure knowledge acquisition and integration.

Trowler et al (2012) argue that with the rise of interdisciplinarity and massification traditional disciplinary structures are being replaced by



interdisciplinary approaches to study. Both programmes under study are not interdisciplinary in nature and all the modules the students study are provided from within the discipline. The arguments against a disciplinary approach in Trowler et al (2012) do not apply to these programmes. The institution would have a modular curriculum albeit within a discipline. The programmes within the institute would have a very narrow and specialist set of modules and the focus in the programme delivery would be disciplinary.

#### ***COMPOSITION AND ORGANISATION OF THE SURVEYS.***

All of the 264 students in the two cohorts under investigation were circulated three separate questionnaires during their first academic year. The first questionnaire was administered during the first semester and gathered the students' initial perception of the Institute and the reasons for choosing their course of study. This survey had a response rate of 47%.

The second survey, with a response rate of 55%, took place at the start of the second semester and surveyed students' views on their continued progress on their course, any issues that they may have come across, difficulties they have encountered and any problems which may have caused the students to consider dropping out of the programme.

The third survey took a final snapshot of the students' experience at the end of the first academic year and asked the students to reflect back on their initial impressions. This had a 42% response rate.

#### ***COMPOSITION AND ORGANISATION OF FOCUS GROUPS***

The focus groups were organised according to the prior educational experiences and socio-economic background of the participants. This meant that the focus groups were ideally homogeneous in background and not attitude (Barbour 2007).

**TABLE 7: FOCUS GROUP NOTIONAL SAMPLING GRID**

<b>Group Number</b>	<b>Socioeconomic class</b>	<b>Prior Academic Performance</b>	<b>Number of participants</b>	<b>Number of invitations</b>
1	Lower	High	7	28
2	Higher	High	3	23
3	Higher	Low	1	21
4	Lower	Low	3	9

The four focus groups were organised to provide homogenous groups which facilitated group interviewing. However, the differences between the focus groups documented diverse variations and identified common patterns (Punch 2009). Focus groups are also useful where people feel isolated and crave the opportunity to talk to other students in the same situation as themselves (Barbour 2007). The actual size of the focus groups was between one and seven participants (Table 7).

According to Barbour (2007), between three and eight participants is the ideal size for social science research, allowing the researcher to identify individual voices, seek clarification and explore different views as they emerge (Barbour 2007). However some of the focus groups had fewer participants as all of the students who were invited did not attend.

When organising a focus group there is the question of the number of participants in a focus group and there is a trade-off between a large number of participants and a smaller number which will achieve a depth of discussion and socially constructed perspectives. In order to let individual voices to be heard and to give the researcher the opportunity to seek clarification, three or four participants were the target numbers for each of the focus groups. All the participants were pre-acquainted as they were students in the same class. This meant that the students were more comfortable and there was enhanced understanding between participants. However, there was a key issue that needed to be considered. This issue was the importance of ensuring and maintaining confidentiality in order to minimise negative ramifications. The students were also not allowed to mention any person by name if the comments

or discussion were negative. The group was also allowed the necessary space and time to reach consensus and time was made available at the end for any disclosures that participants wished to make.

### **3.5 DATA COLLECTION**

#### ***DATA COLLECTION AND THE USE OF MIXED METHODS***

The objective of the research was to collect the data as it occurs in a non-interventionist way to answer the research questions. The data included both primary data which had been collected for the purposes of this research, student focus groups and student surveys, and secondary data which was collected for another purpose, for example the data in the student record system and exit interviews with students carried out by the registrar's office. The primary data also served to enhance the secondary data by giving context to the student responses. The complete list of all data that was used is listed in Table 8. The mixed methodologies used gave a greater insight than using the most frequent methodologies encountered in the literature (Blumberg et al. 2008).

#### ***QUANTITATIVE DATA SOURCES***

The secondary data on student performance was based on the documentary data held in the academic records in the student record system and was combined with the survey responses to give an academic performance and socio-economic class context to the student responses.

This quantitative data helped to understand the individual student profiles and allowed the responses in the survey questions to be contextualised with the students' prior academic and socio-economic background and their academic performance. This also helped to identify the students who were willing to participate in the focus groups.

The specific research data was gathered in two phases. In the first phase students in their first academic year were surveyed and their academic performance was recorded together with information gathered as part of the student registration process. This provided both qualitative and quantitative

Table 8: Overview of research data

Data	Data Source	Source	Number	Purpose
Student Registration Record	Secondary	Student Record System	264*	To understand student background, for example prior educational attainment, and home.
HEA Access Survey Data	Secondary	Student Record System	181*	To Understand in detail student Socio Demographic Information
Student Survey 1	Primary	Student Responses	125 (111)*	What students were doing previously, why they chose the course, impressions of ITS, general questions around finance and other supports?
Student Survey 2	Primary	Student Responses	147 (138)*	Issues which could impact on continuation of programme, On-going impressions of the institute, Confidence in ability to complete the programme.
Student Survey 3	Primary	Student Responses	110 (90)*	Survey to understand student engagement using the NSSE 2011 survey as a template.
Exam Results Semester 1	Secondary	Student Record System	254*	To Understand student progress through their academic performance.
Exam Results Semester 2	Secondary	Student Record System	234*	To Understand student progress through their academic performance.
Exam Results Repeat Semester 1 & 2	Secondary	Student Record System	*	To Understand student progress through their academic performance.
Student Focus Groups	Primary	Interview Notes / recording / transcription	4 Focus Groups 14* Students	To understand what the students felt the college had done to assist retention, to understand the student's college experience and how that experience could be made better. The student's motivation to complete was also researched.

**\*Responses identifiable by student number**

data. Based on the analysis of this data, phase two collected additional qualitative data through focus groups of students during their second year of study.

## **QUALITATIVE DATA SOURCES**

One of the methods of gathering qualitative data was through four focus groups. Qualitative data was also gathered in a number of free text questions as part of the student surveys.

This research was organised around the four phases of the student lifecycle:-

1. The student's disposition before entry.
2. The student's perceptions after entry.
3. The student's learning styles and engagement
4. Student perception in their second year.

Phase one focused on answering research question one where the student pre-entry attributes were measured against student performance. The data for phase one primarily comprised of the data in the student record system supplemented with a number of survey questions to answer research question one - what student pre-college characteristics impact on retention? Phases two, three and four helped to understand research question two what post entry factors impact on student retention? Research questions three and four were answered based on analysis of all the phases and this aided the understanding of the student experience, its impact on retention and the strategic and operational actions necessary to ensure student success.

These phases of the student lifecycle were examined with the aim of understanding factors which impacted on student success at each stage in the lifecycle, measured by examination performance. This allowed for students effectiveness to be measured based on outcomes and assisted in making appropriate and robust recommendations regarding a range of strategic and operational issues; additionally the findings were also used to validate the student partnership – engagement triangle model.

The conceptual research framework uses qualitative and quantitative data collected from students to triangulate the data and bring together different

methods, combining the strengths of both methods to answer the research questions and to provide reassurance. The qualitative methods were used to describe surface effects of causal relationships, while much greater depth was achieved in the quantitative data to understand which causal powers are likely to generate specific events (Modell 2009). It is important that the student experience is measured from the student's perspective as the student's perception and perspective plays a key part in the relationship between the student, faculty, and the institute.

### ***PLANNING MATRIX***

The planning matrix (Table 9) identifies all the methods used to answer each research question.

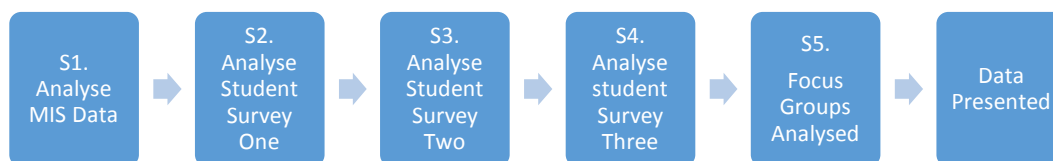
**TABLE 9: PLANNING MATRIX**

<b>Questions to be answered</b>	<b>Methods / Data Used.</b>
<b>Research Question 1 (RQ1).</b> What student pre-college characteristics impact on retention?	Survey / Student Records Registration / Focus Groups. <i>Qualitative / Quantitative, Primary and Secondary</i>
<b>Research Question 2 (RQ2).</b> What post entry factors impact on student retention?	Survey / Student Records Examinations / Focus Groups. <i>Qualitative / Quantitative, Primary and Secondary</i>
<b>Research Question 3 (RQ3).</b> What strategy can the college deploy to improve student retention, and can this be tailored to the student / programme characteristics?	Survey / Student Records Examinations / Focus Groups. <i>Qualitative, Primary and Secondary</i>
<b>Research Question 4 (RQ4).</b> Operationally what can the college deploy to improve student retention?	Survey / Student Records Examinations / Focus Groups. <i>Qualitative, Primary and Secondary</i>

However, research questions three and four were primarily answered using qualitative data which was gathered from the focus groups and from the free text questions in the student surveys, while questions one and two were primarily answered from the background information in the student records system and from the student surveys.

To get a complete picture of the students and the student experience and engagement it was necessary to include a variety of data sources. These included data held on the student in the Institute's student records system, individual responses to student surveys, and the responses during the focus groups. A full list of all the data analysed is given in Table 9. The literature identified aspects of student attributes and indicators that might be useful in addressing the research questions.

The data analysis was carried out over five stages.



**FIGURE 14: STAGES OF RESEARCH PROJECT**

#### ***STAGE ONE – MANAGEMENT INFORMATION SYSTEM (MIS) DATA***

The Institute collects a wide range of information on its students from pre-enrolment information used to assess students for entry, information provided by students on registration and the ongoing academic history as students' progress through their studies. This information allowed an evaluation of the students' prior educational attainment and socio-economic class together with subsequent examination performance. Stages two to five asked the students for their student number and it was possible to cross reference other data with the students' performance and their attributes prior to enrolment. This information was core to answering research question one.

### ***STAGE TWO - STUDENT SURVEY ONE - STUDENT DISPOSITION BEFORE ENTRY***

Students bring a variety of attributes with them to the Institute, for example socio-economic background and prior educational attainment, which have an impact on the students and the capital available to the students. The students also bring personal motivations to their studies. When answering the research questions it is necessary to consider how students have made the decision to apply to their programme of study.

### ***STAGE THREE – STUDENT SURVEY TWO - STUDENT PERCEPTIONS AFTER ENTRY***

The research project built up a profile on each student based on pre-enrolment information and included previous academic history, socio-economic background, a survey of students at three key points in their first academic year - at the start of the year, at the start of semester two and at the end of semester two. The survey compared the self-reported experience of the student with background information and focus group results. This diversity of approach increased the understanding of what helped a student succeed and what caused a student to fail.

### ***STAGE FOUR – STUDENT SURVEY THREE - STUDENT LEARNING STYLE AND ENGAGEMENT***

One option open to survey designers is to use an existing measuring instrument rather than constructing an original instrument. To construct a good measuring instrument, particularly if the variable is complex and multidimensional, requires a lot of work and testing.

There are advantages in using pre-existing questions and these include gaining the most accurate information from responses, conveying the meaning of enquiry as the research intended and minimising the time burden on respondents (Hyman et al. 2006). Using a survey instrument that is similar to an established instrument allowed comparisons between students on this study and other studies using the same instrument (Punch 2009).



There are a number of successful examples of student engagement surveys carried out over the years which have been tested and have proven to be reliable and valid. The NSSE analyses the responses each year to ensure that the results are reliable and have internal consistency, have temporal stability and equivalence, and validity - that is the survey measures what was intended to measure (Indiana University 2012).

The students were surveyed to determine their learning style and level of engagement. The survey instrument used was similar to the NSSE. The advantage of doing this is that the pre-existing questions will have been extensively tested, and indeed the NSSE has been in existence since 1999.

Having examined a number of surveys I decided to base my survey on “*The College Student Report*” (Indiana University 2013), which is used in the US and Canada to develop the NSSE. This survey was selected because its purpose is to measure student engagement and it has been designed to have validity and reliability and has a long history going back to 1999 when it was first used in 140 institutions.

#### ***STAGE FIVE – FOCUS GROUPS***

A focus group is a moderated group interview, confined tightly to a defined topic with the emphasis on group interaction and the construction of meaning (Bryman 2012).

In the second year, focus groups were used to further understand the findings of phase one. Students participated in four focus groups during which students were asked about their college experience, how it could have been better, their motivation for completion and their reflections on their time in college to date.

The focus groups were organised based on socio-economic and prior educational attainment of the students, populated by students who previously agreed to participate in a focus group during the earlier student surveys. The

participants in the individual groups were students in the same classes, so the students would be known to each other.

In planning the focus groups the following approach was adapted (Cohen et al. 2011). Firstly the variables that were to be measured were specified, the format and order of the questions were considered and the information was captured and analysed. The focus group interviews were transcribed and the findings incorporated into the research.

### ***GROUP INTERACTION***

It was necessary in the planning phase to consider the status difference between the interviewer and the respondents. This was minimised by developing a more equal relationship based on trust during the introduction and strategies to develop this trust include self-disclosure by the researcher (Punch 2009). The focus group dynamic changed as the interview progressed from a discussion through to understanding individual's views. The hallmark of focus groups is the explicit use of group interaction to produce data and insights that would be less accessible without this group interaction, bringing to the surface aspects which might otherwise not be exposed, stimulating the participants in making explicit their views, perceptions and motivations (Punch 2009). The focus groups were successful in this regard.

### ***TOPICS***

A focus group discussion guide (included in Appendix two) was used to plan and guide the discussion during the focus groups. The questions and topics were pre-planned and designed to fill gaps identified in the information gathered from the student surveys and to provide more detail and context. The questions were designed to be open questions, encouraging dialogue and challenging the participants. The focus groups were designed to have a number of easy questions to lead the participants into the focus group, and in the design an order was proposed. However, in practice the order of the questions was changed in the focus groups so that there was continuity in the group discussions.

### ***CODING OF QUALITATIVE DATA***

The verbatim transcripts of the focus groups were analysed using a coding frame to convert the qualitative data into quantitative form to aid analysis. The coding frame reduced the qualitative data into categories of lists and the transcripts were analysed based on this coding frame.

There were six topics which were discussed in the focus groups and the coding frame was designed to analyse the questions in the discussion guide. Each topic was broken down into a number of open questions which were analysed individually. The use of open questions gave the participants the opportunity for personal expression which was in contrast to the surveys which were predominantly closed questions. This provided additional richness and helped triangulate the findings of the student surveys.

### ***ETHICAL CONSIDERATIONS FOR FOCUS GROUPS***

The participants in the focus group gave voluntary informed consent and were guaranteed anonymity. There was openness and disclosure regarding the purpose and outcomes of the research project. It was stressed that focus group participants had the right to withdraw from the interview at any stage. The focus groups did not include any young adults and the students who participated will not suffer any detriment from participating in the focus groups. Incentives were limited to providing refreshments to the participants during the focus groups. In line with the British Educational Research Association (BERA) guidelines, the participants had the right to privacy of the data collected as part of the focus groups. (British Educational Research Association 2011).

## **3.6 ANALYSIS OF THE DATA.**

The data focused on two cohorts of students who joined ITS in September 2012, representing 20% of the first year intake in that year. The large volume of data gathered ensured that the study was robust and analysed in a methodical manner to reach conclusions on the nature of the college experience and its impact on the student experience and retention.

The data in the student record system and the student surveys is predominantly quantitative in nature. However, some aspects of the student surveys and focus groups are qualitative, where the objective is to observe the phenomena as completely as possible.

Comparison of data from a number of courses and from a number of sources, both qualitative and quantitative, allows the results to be triangulated to try to validate the student engagement - partnership triangle model to better understand what, if anything, the institute can do to improve student performance, achievement and retention. If issues of consistency between the data sources arise, then issues on the hierarchy of sources and which is the most likely interpretation arise (Barbour 2007). Increasingly group interviews are being used after surveys to flesh out views and information (Punch 2009). Any inconsistencies can be investigated in the focus groups to better understand the reasons for these inconsistencies. The students were asked to furnish their student numbers in response to the surveys and a high proportion of students provided their student numbers. In survey one 111 of 125 students identified their answers by student number; in survey two 138 of 147 students identified themselves by student number; and in survey three 90 of 110 students identified themselves by student number.

Recording the student number allowed survey data to be referenced against the socio-economic background, prior educational attainment, academic history and survey responses of the students. This allowed student academic achievement and pre-entry attributes to be compared against student survey results, building a detailed picture or story of each student. Additionally, recording the student number allowed the monitoring of changes in individual student perception and experience over time so that the responses could be cross referenced against the student attributes on entry and their examination performance and retention on the programme.

The main emphasis of the research was to gather a large volume of both qualitative and quantitative data to discover the impact of a large number of attributes of student success and to test the proposed model. The analytical

approach was to examine each attribute independently to understand the impact of that attribute on student performance. Statistical correlations were used to understand the relationship between a number of high level attributes and student success. However extensive use was made of stand-alone analysis of individual student attributes to understand disciplinary differences and attributes which impacted on student success.

The research was carried out in the researchers own Institute and Punch (2009) notes a number of advantages and disadvantages to this approach particularly in the context of educational research. These advantages include convenience for the researcher, with ease of access to the research subjects and ease of gaining consent. The research was relevant to the researcher and the institution and the researcher brought a level of insider knowledge and understanding to the research which an outsider may not, allowing the research to be framed in the context of the Institute. In addition, the volume of secondary data would not have been available to researchers outside the Institute. Despite the advantages of researching in the researcher's own Institute, Punch (2009) has noted a number of general disadvantages. The researcher may have a vested interest in the outcome of the research and this might lead to bias and subjectivity. If the research is too embedded in one institute there may be issues about the generalisability of the findings and researching students in the researchers own institute leads to ethical considerations and challenges.

Care was taken to minimise the negative aspects of researching in the researcher's home institute by researching students in departments not directly involved with the researcher. The departments involved in the research have a diverse selection of programmes and student attributes with varying levels of engagement and retention. This allowed the results of the research to be generalisable.

### ***EVALUATION CRITERIA***

The research was evaluated using four main criteria - internal validity, external validity, reliability and objectivity. These four main criteria have been translated

into four questions which the naturalist has an obligation to consider (Guba and Lincoln 1982). Lincoln and Guba's criteria were used to evaluate the trustworthiness and worth of the study. In this context trustworthiness involves establishing credibility, transferability, dependability and conformability (Cohen and Crabtree 2006).

### **Credibility**

Credibility or confidence relates to the truth of the findings in the context in which the inquiry was carried out. The term internal validity would be used in other paradigms to represent credibility. Credibility was established through the use of prolonged engagement with the students involved in the study over two academic years, triangulation of the results of the study from a number of sources, Management Information Systems (MIS) data, student surveys and focus groups. As naturalist enquiry represents the possibility of multiple realities, which vary from individual to individual, the focus groups were used to confirm the analysis of the qualitative data and provide depth to the analysis (Guba and Lincoln 1982).

### **Transferability**

External validity and generalisability are terms that describe transferability in other paradigms. Sampling to provide a representative sample of the population is key. For the research to have transferability the findings must have application in other contexts, achieved by using "thick descriptions" where the researcher makes explicit the pattern of social and cultural relationships and puts them into context using sampling that is intended to maximise the range of information collected (Guba and Lincoln 1982).

In this research the sample was limited to one institution and to two different cohorts of students. The aim of the research was to validate the model and find answers for one institution, and also to provide recommendations to improve the student experience and to positively impact on student retention. To achieve this aim the findings are limited to this institution and are not transferable to the Irish university sector in general, where the profile of

students and programmes of study is different as is the institutional engagement style. However, some of the findings will have applicability within similar institutions in the Irish third level sector.

### **Dependability**

Dependability or reliability of the research means that if the research was repeated the results would be consistent with the same or a similar set of respondents. However, as an emergent design was used, where previous findings informed later stages, an exact replication of the study would be unlikely as another researcher might choose a different path for analysis from the same data. However, through and overlap of methods using triangulation supports dependability to the extent that complementary results should be produced given the volume and depth of the information.

### **Confirmability**

Objectivity or confirmability is the degree to which bias enters the findings. The findings should solely be from the results of interaction with the respondents/participants of the research, and not influenced by the bias, motivations and interests of the inquirer.

Guba and Lincoln (1982) advise that triangulation, understanding one's epistemological assumptions and findings, can be confirmed by tracing back through analysis to the original data. This study was designed to reduce the risk of non-conformability and used triangulation to confirm assumptions and through understanding the potential for bias and mitigating it. The two cohorts involved in the study, while being in the same institute as the researcher, had no connection to the researcher and indeed care was taken to ensure that the lecturers who taught the students were not directly involved with the researcher.

### ***LIMITATIONS***

The research approach is not generalisable to all institutions in the Irish third sector as a similar mix of student attributes may not be present in other

institutions. There was a difficulty in identifying which students have withdrawn and the date of withdrawal. While some students formally withdraw other students just stop attending (Blaney and Mulkeen 2008). The students who do not formally withdraw do not get the opportunity to feed back to the Institute and also there is no opportunity for the Institute to advise the students on what they might do next. This research highlighted the need for the Institute to be more proactive in engaging with students by recording when and why they drop out of their course. Also the non-participants in the surveys and focus groups may be students who had dis-engaged from the Institute and this may limit the applicability of the findings. There are also differences between systems in Ireland and the UK/US, and indeed between institutions in Ireland and the catchment areas they serve which have an impact on the generalisability of the research.

While all the advantages apply and were the reasons for selecting this research project and framing the research questions, in particular access to the institutional data and students for the surveys and focus groups, they did not impact negatively on the outcome of the research. It is necessary to consider the disadvantages of using this approach and to mitigate against the risks of using such an approach and control against them. The risks include selective sampling, bias in the analysis of data and interpretation of results, concerns of a vested interest in the outputs of the research. Particular care was taken at every stage to ensure that no vested interests influenced the researcher or the outcome of the research.

Answering the research questions, validated the model and gave a greater understanding of the issues which impact on student retention and the operational and strategic actions available to the institution. The recommendations from the research would also help to improve the student experience and demonstrate a need and value in engaging in wider institutional research, leading to more targeted marketing efforts to both attract students most likely to succeed and also invest more resources in student support mechanisms to ensure that students who were recruited have the potential to proceed.



## ***ETHICAL CONSIDERATIONS***

The University of Bath has strict ethical protocols in a number of areas, particularly in research which includes animals, vulnerable adults and children. Current ethical protocols in the University of Bath do not apply to the type of postgraduate research undertaken in this study. However, BERA have useful ethical guidelines which were used as the basis of the study's ethical approach (British Educational Research Association 2011). In order to ensure that the research was carried out ethically the BERA guidelines on responsibilities to participants and the community of educational researchers were adopted.

The research and the participants role in it was fully explained to the research subjects and there was openness and disclosure regarding the research. The subjects were asked to give voluntary informed consent, and had the right to withdraw at any stage during the research process. The research took care not to include vulnerable adults, and the privacy of the participants' data was guaranteed which is the norm for the conduct of research (British Educational Research Association 2011). Care was taken to ensure anonymity of the students and in ensuring that no individual student or staff member could be identified in this thesis.

The researcher, in line with BERA guidelines, ensured that subjects had voluntary informed consent, openness and disclosure, the right to withdraw, young adults were treated appropriately, that the students did not suffer any detriment from participating in the research. The researcher also ensured that any incentives were appropriate, the right to privacy of the data collected subject to the responsibility of the researcher to disclose information which would otherwise allow the continuation of illegal behaviour (British Educational Research Association 2011). In addition to the ethical considerations of the participants, there is an ethical obligation to the research community. Care with the interpretation of the results, recognising the limitations of the research controlled for this risk (Blumberg et al. 2008).

ITS currently does not have an ethics committee so it was not possible to get formal ethical clearance from the Institute for this research project. However, senior researchers within the social sciences area in ITS were consulted and there was consensus that the approach of the research project was appropriate and that there were no issues that required institutional anonymity in the thesis.

### **3.7 REFLECTION AND DISCUSSION**

This longitudinal study gathered data over two academic years. As the study progressed and new insights became available the research was modified to answer emerging questions. The research used existing institutional data and student surveys to try to understand the stories of individual students. This data was combined to establish attributes of successful students. In the second year of the study the students' stories were further fleshed out in the focus groups which gave a richness and context to the survey and institutional data. The choice of student cohorts used in the case allowed comparisons between students and helped to understand successful interventions.

As the research developed and data was analysed, any findings of interest were explored in the follow up surveys and focus groups. At each stage where decisions were made regarding the content of questionnaires or focus groups, the previous results were reflected on to ensure that value was added to the research at each stage.

The values, interests and the curiosity of the researcher guided this enquiry and indeed informed the researcher's strategy as the research progressed. It was felt that it is important to understand the causes of student dropout from an institutional perspective and to mitigate against these. As the research progressed and the researcher's understanding of the issues and empathy with the students grew, approaches to the researcher's own role in the Institute changed. The researcher would be more empathetic to the students and understood the unspoken challenges that they may have had in coming to higher education.

The challenges with the research data were that there was a large amount of data collected on each student. This data provided rich stories of individuals who successfully and in some cases unsuccessfully attended the Institute. The volume of data collected on each student across a variety of fields from background, academic performance and the student's environment, motivations, hopes, aspirations and difficulties gave a deep understanding of the sometimes unknown challenges that students face.

The research was focused on validating the student engagement – partnership triangle, a model which was proposed following an examination of the literature on student engagement.

## **4 CHAPTER FOUR - PRESENTATION OF FINDINGS**

### **4.1 INTRODUCTION**

This chapter examines the characteristics of a cohort of a total of 241 students on the early childhood care and education programme and on the computing programmes in ITS who joined the institute as first year students in September 2012. These programmes have been offered at ITS over recent years and are offered at level seven and level eight on the NFQ. This research describes the attributes, capital, experiences, motivation and family background these students bring to their third level studies and considers how these attributes frame the students' likelihood of success in their studies. This greater understanding of the characteristics of the student cohort will lead to a greater appreciation of the needs of the students and the challenges they face, and enable the Institute to develop appropriate strategic and operational responses to them. Implementation of these responses will lead to an enhanced student experience and an increase in retention rates at the Institute. The data on the characteristics of the cohort of students on the programmes in these two disciplines of study was gathered in two phases. A full set of tables is provided in the appendices.

The student engagement - partnership triangle model outlined a number of pre-college characteristics and attributes that impacted on student success, namely prior educational attainment, socio-economic status and dispositions. The students' socio-economic background impacts on the social and cultural capital that the students have in the habitus of higher education, which impacts on the students and their ability and disposition, including their motivation for the course and their likelihood to succeed. These characteristics and attributes were part of the student engagement partnership triangle. The research, through primary and secondary data, categorised the students' disposition before entry, the drivers and influencers in undertaking a higher education course and their interaction with the college in advance of entry. The research identified that there was a higher proportion of students from the lower socio-economic groups on the courses under study and in the Institute of Technology sector generally when compared with the national profile. This sets this study out from other studies which have primarily been carried out in universities.

- In phase one, during their first academic year, students were surveyed on three occasions and their academic performance was recorded, together with information gathered by the Institute as part of the student registration process. This provided both qualitative and quantitative data.
- In phase two, based on the analysis of the data collected during phase one, additional qualitative data was collected during student focus groups which were held towards the end of their second year. This qualitative data was supplemented with additional secondary quantitative data on student performance from the students' academic history, as they progressed through their studies.

This chapter will be organised around the student engagement - partnership triangle model, viz:

1. students social and academic attributes;
2. student motivation;
3. student engagement and approaches to learning; and
4. student perceptions in the second year of study.

## **4.2 STUDENTS SOCIAL AND ACADEMIC ATTRIBUTES**

Terenzini and Reason (2005) identified three important pre-college characteristics and experiences: socio-economic demographic characteristics, academic preparedness and performance, and student dispositions. This theme is consistent throughout the literature and examining these features will help inform the study and provide an understanding of the factors that impact on student success at ITS. This section, aligned with the model, will consider student dispositions under two broad headings - social and academic factors - under a number of sub headings as follows:

### **Social Factors**

- parental socio-economic and educational background;
- interaction with ITS prior to joining;

- influences on student choice;
- factors influencing choice to attend ITS;
- gender;
- grant status / financial status;
- age / mature students;
- accommodation / commuting status.

#### Academic Factors

- academic preparation and performance;
- previous higher education experience;
- parental education / first generation;
- CAO entry points

### 4.2.1 SOCIAL FACTORS

#### *PARENTAL SOCIO-ECONOMIC CHARACTERISTICS*

The socio-economic characteristics will be considered, firstly, in a national context examining the distribution of the national population generally within the standard socio-economic classes and, secondly, comparing this distribution with the distribution of the cohort of students at ITS in the two discipline areas being considered for this study.

#### *NATIONAL CONTEXT*

The parental socio-economic group classification shows that a higher proportion of the students involved in the study are from the lower socio-economic class when compared with the national socio-demographic distribution.

Table 10 compares the students' socio-economic background with the last national census of population carried out in 2011. This indicates a different socio-economic profile at ITS than would be expected, based on the 2011 census information. Understanding the impact, if any, of this difference in socio-economic status is key to understanding the challenges that the students

face in accessing higher education and the targeted steps that need to be taken to improve student retention and enhance the student experience in ITS

**TABLE 10: PARENTAL SOCIO-ECONOMIC GROUPS**

<b>Parental Socio-Economic Group</b>	<b>2011 Census % of Population</b>	<b>All Parents in the study (%)</b>
A - Employers and Managers	15.4	8.9
B - Higher Professionals	6.4	2.1
C - Lower Professionals	12.1	10.4
D - Non Manual	20.4	18.1
E - Manual Skilled	8.5	6.4
F - Semi Skilled	7.9	13.5
G - Unskilled	3.3	6.1
H - Own Account Workers	4.3	5.5
I - Farmer	3.7	7.7
J – Agricultural Workers	0.5	0.6
Z – Unknown but gainfully employed	17.3	20.6
N=	4,525,254	326

### ***INSTITUTIONAL IMPACT***

The impact of the lower socio-economic points on students is twofold. Students from lower socio-economic backgrounds tend to perform less well academically in second level education when compared to students from higher socio-economic backgrounds. Bourdieu et al (1979) refers to this educational handicap and generally it is the students from higher socio-economic classes who bring social and cultural capital to bear on the students' second level studies. The students will be motivated by parents who are interested in their children's education and may provide additional supports to them in their studies through the deployment of cultural, social and economic capital. Students from lower socio-economic groups may lack the cultural, social and economic capital necessary to be successful in higher education. The vocabulary and the experience of higher education may be an alien concept for students who may be the first generation of their family to attend a higher education institution.

The impact of socio-economic status (SES) is assessed in two ways in this study. The comparison between SES and CAO points (as a proxy for prior educational attainment) by examining evidence of educational handicap as proposed by Bourdieu (Bourdieu et al. 1979) amongst the cohort of students in this study and by examining the impact of SES on the performance of the students on the higher education programme.

#### ***IMPACT OF SOCIO-ECONOMIC STATUS***

The student cohorts investigated in this study are over-represented in the lower socio-economic groups. The overall impact of the socio-economic profile of the students is that there is a strong statistical correlation between student socio-economic profile and results at the end of year one. Students from lower socio-economic class by father's occupation have statistically lower pass rates at the end of year one.

Students from lower socio-economic backgrounds are doubly disadvantaged. Not only have these students got lower CAO points - evidence of educational handicap (Bourdieu et al. 1979) - but they also do not perform as well in higher education.

#### ***IMPACT OF SOCIO-ECONOMIC PROFILE AND CAO POINTS ON GPA***

When the correlations are examined in detail, they show that there are strong statistical correlations between CAO points and year one GPA for computing students, and father's socio-economic group and year one GPA for all students compared to computing students. This may indicate that, for certain cohorts of students, there is a relationship between CAO points and paternal socio-economic group and GPA which may be a useful predictor both of student success and of the students who may require targeted support.

#### ***IMPACT OF SOCIO-ECONOMIC PROFILE ON RESULTS***

Among the factors identified by a number of authors in the literature review that impact on student outcomes, and incorporated into the model, is the socio-economic background of the student and this has been incorporated into the model. Tinto (1975) argues that socio-economic status is inversely related to



dropout and is one of the factors that combine with commitment and the institutional academic and social system leading to dropout decisions.

**TABLE 11: SUMMARY OF STATISTICAL CORRELATIONS**

<b>Summary of Statistical Correlation</b>					
<b>Variables</b>		<b>Student Cohort</b>	<b>Pearson Correlation</b>	<b>Sig. (2-Tailed)</b>	<b>N</b>
<b>CAO Points</b>	<b>Year 1 GPA</b>	<b>Computing Students</b>	<b>-0.401</b>	<b>0.000</b>	<b>146</b>
<b>Father's Socio-economic Group</b>	<b>Year 1 GPA</b>	<b>Computing Students and Early childhood care and education Students</b>	<b>-0.220</b>	<b>0.011</b>	<b>134</b>
<b>Father's Socio-economic Group</b>	<b>Year 1 GPA</b>	<b>Computing Students</b>	<b>-0.273</b>	<b>0.012</b>	<b>84</b>
Father's Socio-economic Group	CAO Points	Early childhood care and education	0.194	0.112	68
Father's Socio-economic Group	CAO Points	Computing Students and Early childhood care and education Students	-0.133	0.125	134
CAO Points	Year 1 GPA	Early childhood care and education	0.185	0.150	62
Mother's Socio-economic Group	CAO Points	Computing Students and Early childhood care and education Students	0.116	0.205	121
CAO Points	Year 1 GPA	Computing Students and Early childhood care and education Students	0.096	0.257	142
Father's Socio-economic Group	CAO Points	Computing Students	-0.113	0.318	80
Mother's Socio-economic Group	Year 1 GPA	Computing Students	0.096	0.359	94
Mother's Socio-economic Group	Year 1 GPA	Computing Students and Early childhood care and education Students	0.070	0.396	151
Mother's Socio-economic Group	CAO Points	Computing Students	0.068	0.517	94
Mother's Socio-economic Group	Year 1 GPA	Early childhood care and education	0.031	0.833	48
Father's Socio-economic Group	Year 1 GPA	Early childhood care and education	-0.018	0.901	51
Mother's Socio-economic Group	CAO Points	Early childhood care and education	0.007	0.962	48

Other authors such as Astin (1999), Pascarella and Terenzini (2005) and Bean (1980) point to social factors and the student's socio-economic background as key determinants of student success.

Comparing the impact of mother's socio-economic background and year one academic performance using year one GPA as a proxy, there is no significant correlation between these variables. Also, there is no significant Pearson correlation<sup>2</sup> between father's socio-economic group and year one academic performance; however, the Pearson correlation is negative indicating that students from a lower socio-economic group perform better in the year one examinations. The Sig. (2-tailed) test is showing a significant correlation for father's socio-economic class and academic performance signalling the possibility that father's socio-economic group can be used as a predictor of student success. When the impact of parental socio-economic group and year one GPA is considered for each programme, it can be seen that there is weak negative correlation between parental socio-economic class and year one GPA, when using the Pearson correlation. This could be a factor of the number of FETAC students from the lower socio-economic classes performing better academically, due to the successful completion of the FETAC programme. Taking a FETAC programme may provide a training in the discipline and the students may bring more maturity and informed choice to their studies. For the computing students, there is a strong Sig. (2-Tailed) correlation between father's socio-economic class and year one GPA. The number of parental occupations classified as Z - "All other workers gainfully employed" - skews the correlation. When examining the relationship between the parental socio-economic background and year one GPA, there is no significant correlation. However, when compared with the early childhood care and education students, there is a wider dispersion of average GPAs from zero to 82.3 for the computing students, and, if the one student with a zero GPA is excluded from the early childhood care and education students, the student GPAs are in the band 43 to 68 with 25% points separating the weakest and strongest student. The HEA considers that a large proportion of the unknown category is represented by the lower socio-economic classes (HEA 2014).

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<sup>2</sup> The Pearson correlation is a measure of the linear correlation between two variables where +1 is a total positive correlation, -1 is a total negative correlation and 0 is no correlation.

## ***CORRELATIONS BETWEEN SOCIOECONOMIC PROFILE, CAO POINTS AND PERFORMANCE***

A range of statistical tests were carried out to determine the variables where there was a statistical correlation. Table 11 summarises the statistical correlation between the variables in this section. For a sig. (2-tailed) test, where the value is less than or equal to 0.05, we can conclude that there is statistically significant correlation between the two variables. The correlations are presented in order of statistical significance in the table, with the statistically significant correlations shown in bold italics. This shows a statistically significant relationship between CAO Points (Prior educational attainment) and GPA (Academic Performance) and between father's socio-economic group and GPA. This gives strong evidence that based on CAO points and paternal socio-economic class, where the CAO points are earned in the leaving certification examination rather than on Further Education Training and Awards Council (FETAC), accredited training programmes are statistically valid predictors of student success. The study focuses on these as they are the most statistically significant.

The CAO points were not statistically significant for the early childhood care and education cohort because there is a high proportion of students who enter from training programmes where the CAO points score is not calculated on a leaving certificate score, e.g., students who complete a training programme accredited by FETAC.

The students on the computing programmes have a more diverse range of prior educational attainment when compared to the early childhood care and education students and, as the relationship between prior educational attainment and year one performance is significant statistically, there are challenges for this programme in teaching this diverse range of learners successfully. The spread of results in the computing programmes at the end of year one may be evidence of the need to consider more fully the diversity of ability in the computing programmes in the teaching of the students. This finding supports the need to take student attributes into account when designing programmes as identified in the model.

### ***INTERACTION WITH ITS PRIOR TO JOINING***

Students were asked to detail their interaction with ITS prior to attending the Institute. Many students used several methods to inform themselves about the Institute and the course. The website was the predominant source of information and the prospectus was also used by most students. Of the 125 students, 103 consulted the website and 80 consulted the prospectus. The students who had consulted the prospectus had a higher pass rate (65% overall). This could indicate that the students had made other contacts with the Institute to obtain a copy of the prospectus or had received the prospectus on a visit to the Institute or from a visit to their schools guidance service.

The most successful interaction was a meeting with the head of department as all five students who met with the head of department in advance passed year one. Meeting the head of department could have provided clarification of the programme, resulting in students who were not suitable or committed to the programme making another choice. For computing students who visited the open day, this was the primary influence in their choice of programme and they had a pass rate of only 29%.

### ***INFLUENCES ON STUDENT CHOICE***

The literature and model identified that the student's commitment to the course and the Institute are important factors which contribute to student success (Pascarella and Terenzini 2005). Understanding the impact of student influences on student success might give insight into how to market courses to engage the student influencers and understand how the influencers of student choice impact on student success.

### ***WHY THE STUDENT IS GOING TO THIRD LEVEL? - EDUCATIONAL INFLUENCE***

Surprisingly, these influences were mainly outside education with a disappointingly low number of computing students influenced either by teachers or guidance counsellors. The power of family influence was clearly identified in the responses. However, when teachers or guidance counsellors were an influencing factor, the result was students entering with higher prior academic performance on the programmes. For the most successful early childhood care and education students their family is the biggest influence in

their decision to go to college. For computing students who were influenced to go to college by a friend the probability of success appears low; however, it should be noted that this is from a base of only three students.

These influences may be an indication of goal and institutional commitment in computing. Where family and friends influenced the choice of programme, outcomes were poor for the student, while the most successful students were influenced by their teachers. These findings indicate that, for different disciplines, different influences guide successful students.

### ***WHY THE STUDENT PICKED THE COURSE?***

In assessing student choice, a number of questions were posed to the students. The motivation for selecting the course was predominantly career focused for each course. For the early childhood care and education course the motivation was strongly to work with children while, with the computing course many of the respondents were interested in the area of study but some also indicated an interest in computing as a career because of the better employment prospects. For both courses, the predominant reason for selecting the course was related to an interest in the subject area. There was a clear indication that students chose the discipline which is related to the area in which they wish to seek employment. Of the 86 students who had mentioned an interest in the subject area, 47 (54%) would have successfully completed first year with 63 (75%) being eligible to progress to year two. This is in line with the expected progression rate.

When the students were questioned about the reasons for going into higher education, qualifications and job related were important for both sets of students. However, a higher number of computing students were more interested in career than qualification. For both courses, the students' choice to enter higher education was career focused.

A number of early childhood care and education students joined the programme to become primary school teachers and this course affords

students the opportunity to transfer to primary teaching courses. Otherwise, after second level these students would not have had the higher entry requirements for a course leading directly to a teaching qualification.

### **CAO CHOICE NUMBER**

Applicants rank their choice of course in the CAO applications system and are offered the highest preference that they meet the entry requirements for.

In the survey, there was clear evidence that student choice preference is an indicator of institutional and course commitment. Most students surveyed would have got their first choice in the CAO application system. Students who did not their get their first choice would not have reached the entry requirements for their preferred programme. Students who achieved entry to a higher choice programme probably would have more goal and institutional commitment than students who would have received a lower choice. When examining the pass rate based on course choice, the findings are particularly stark for the computing students. Students who had not received their first choice had very much reduced pass rates. It is important, therefore, that the Institute needs to attract students who have selected the Institute as first choice, aligning the students' goal commitment with their programme of study. Not having achieved their first choice of place may have a negative impact on the students' goal commitment to their course and the Institute.

### **FACTORS INFLUENCING CHOICE TO ATTEND ITS**

In answer to the question *"What factors influenced your choice to attend ITS?"*, students predominantly picked four factors: reputation of the Institute, close to home, social life in Sligo, and facilities available on the campus. Students who offered these reasons had the highest pass rates. Students who chose the following three factors performed poorly - they had to come to ITS as they could not afford to go to an alternative preferred college, friends were also going to ITS, or they did not want to be close to home. When looking at this by course, the computing students chose reputation and close to home, and the early

childhood care and education students selected close to home and social life ahead of the reputation of the Institute and its facilities. Students who chose the course based on a guidance counsellor's recommendation had the highest pass rates overall, in particular for early childhood care and education programmes. Students who selected the Institute based on friends going to ITS or came to ITS because they could not afford to go elsewhere performed worst, possibly indicating a poor goal commitment.

The computing courses have a strong reputation as the Institute won the world finals of the Microsoft Imagine Cup in the year prior to these students joining the course, the first time a team from Europe Middle East and Africa (EMEA) won this coveted award. This win was well covered both in the general press and media, and on special interest/computing websites. This enhanced the reputation of the computing course and increased the desirability of the computing programmes in ITS. One student in a focus group indicated that the reason he selected a computing programme in ITS was because of the Microsoft Imagine Cup win.

In the early childhood care and education profession in Ireland, the early childhood care and education course enjoys a strong reputation with active researchers. However, applicants either were not aware or did not consider this as important when selecting a course. This was explored in more detail in the focus groups and students from the lower socio-economic groups with lower prior education attainment came to ITS because it was convenient, they lived in Sligo and it was an affordable option. Students from a higher socio-economic group selected the course because of the reputation of the course. Also the option of a three year course was more attractive, as it offered them the opportunity to get into the workplace relatively quickly after graduation. One of the local students had been made redundant and took the opportunity to return to education, and came to ITS because he was working in the area.

## ***GENDER***

Both programmes have a strong gender imbalance. The early childhood care and education programme is predominantly a female cohort and the computing cohort is predominantly male. Of the 94 early childhood care and education

students, 92 (98%) were female and in computing 126 of the 136 (93%) students were male.

This indicates a marketing challenge to promote the programmes to achieve a greater gender balance across the programmes. For computing, in particular, where the entry requirements are lower, the entry requirements could be raised by targeting promotional material at female school leavers. There are opportunities in student recruitment strategies for both disciplines for designing and promoting the programmes to attract more females in the computing programmes and more males in the early childhood care and education course.

While the literature recognises that student gender is important for students when making decisions regarding their participation in higher education (Bean 1980), this was not examined in the research because there was a strong gender imbalance in the programmes.

#### ***GRANT STATUS***

The Irish State supports certain full time higher education undergraduate students. In Ireland, student grants are means tested on the personal/family income of the applicant, but other factors may be taken into account. At the time the first survey was completed, most students would not have got confirmation that they were eligible for the student grant, as the administration of the student grant was centralised and there were delays for this cohort of students as the new system was introduced. Therefore, in survey two, question five students were asked if they had applied for a student grant. This showed that students who had applied for the grant had a higher pass rate than students who did not apply for the grant. It seems that the additional financial certainty that the grant would have provided the student had a positive impact.

Overall, students who had applied for the grant had a 62% success rate when compared with 48% who had not applied for the grant. As the grant is means tested, the students who had applied for the grant were more likely to be from a lower socio-economic group. The student grant is valuable in opening opportunities to non-traditional students and widening access to education.



Many of the students who did not apply for the grant did not state their parental occupation so it was not possible to confirm their socio-economic group. This is at variance with the national trends where more students not in receipt of a grant are progressing when compared with students receiving a grant. Nationally, 37% of new entrants receive a grant and they are predominantly to be found in institutes of technology in the programmes requiring lower NFQ levels (HEA 2014).

### ***MATURE STUDENTS***

Mature students, defined as aged over 23 on January 1<sup>st</sup>, who are not qualified by virtue either of their leaving certificate performance or their performance on a FETAC course are interviewed by the Institute and, if they are deemed to have a high likelihood of success, they are given a passing CAO score and offered a place on the programme. It can be seen that the computing students are more academically diverse with a wide range of CAO points on entry when compared with the early childhood care and education programme where the points are higher, and the median and average points are significantly higher.

### ***ACCOMMODATION / COMMUTING***

When analysing results based on accommodation arrangements, the early childhood care and education students who lived away from home performed better, while the computing students who commuted performed better. When this was explored in the focus groups, a number of mature computing students said that they used on-line technologies to work together in the evenings and this might possibly explain this difference. It may also be a feature of the gender breakdown of the two student cohorts. Further analysis based on gender shows that male students who commuted performed better than male students staying in rented accommodation, and female students performed better when living in rented accommodation. The type of rented accommodation does not seem to matter for males but females perform better academically in rented houses when compared with purpose built student accommodation. Also, female students living in rented accommodation had a preference for purpose built student accommodation. The accommodation arrangements may be important for some students in allowing them to develop friendships which support them through college and thus enhancing the students' social capital. Some students used working at home to their advantage by using technology

to collaborate with each other in the evenings. This should be encouraged and possibly supplemented by college platforms to support this.

#### **4.2.1 ACADEMIC FACTORS**

##### ***ACADEMIC PREPARATION AND PERFORMANCE***

In addition to socio-economic background, the literature also highlights the importance of students' prior educational attainment and the impact on their success. The students' CAO points are used as a proxy for prior educational attainment and also the Institute's admissions criteria for the programmes which are included in this study are considered. The CAO points are awarded to students based on their performance in their leaving certificate examination or as a result of their performance on a FETAC course.

##### ***POINTS PROFILE DIFFERENCES BETWEEN PROGRAMMES***

When comparing the relationship between CAO points between programmes, for the early childhood care and education programme the minimum CAO points value is 325. This is due to the operation of the Institute's admission procedures where supply of students and demand for the programme dictates the minimum CAO points on entry. The early childhood care and education students are a more cohesive cohort with 120 points separating the lowest and highest student, while 355 points separate the lowest and highest computing students. Later in this chapter, student engagement will be examined to better understand the impact of this diversity on the student and its impact on student learning.

The early childhood care and education programme has a target intake of 90 students and, when compared with the minimum points on the computing programmes, the target intake was 150 students. This increased intake results in lower entry requirements and students on the programme with lower CAO points. Many of these students also would have completed a relevant training programme prior to entry which would have been used to meet the entry requirements of the programme. Another factor where the computing

programmes and the early childhood care and education programmes differ is the level of the qualification.

The early childhood care and education programme is an honours degree programme at level eight on the NFQ. Therefore, there is also a requirement to have two leaving certificate subjects at honours level, resulting in higher CAO points and restricting the Institutes' flexibility in deciding the entry criteria as the two subjects at honours level is a national criteria across all disciplines. It is recognised that the two honours requirement disadvantages students from lower socio-economic backgrounds (McCoy et al. 2010). However, the inclusion of opportunities for entry to FETAC students mitigates against this disadvantage.

The condition of having two honours subjects in the leaving certificate does not apply to students who enter via the FETAC training route. Variations in the entry requirements have the potential to increase educational diverseness in the cohort which can lead to challenges for the lecturers in engaging all students, given the diversity of the students' prior educational attainment.

#### ***STUDENTS WHO ENTERED HAVING COMPLETED FETAC COURSES***

However, when we consider student performance, a FETAC (training) course could be useful in preparing students for higher education, possibly leading to better outcomes for the students than if they attended the college without having completed the FETAC course. With the predominance of students from the lower socio-economic backgrounds who have completed FETAC studies and used these studies to progress into further education, the FETAC programme is useful in allowing students from lower socio-economic groups to progress into, and be successful in, higher education. In addition to preparing them academically for higher education, there may also be an increase in social and cultural capital and overall confidence, with increased goal commitment as an outcome of participation in the FETAC programme, helping these students transition to higher education. It is also noteworthy that a high percentage of the students in the early childhood care and education entered through the FETAC route, reflecting the different admissions policies of the programmes and recruitment strategies. This is despite the strong demand for the

programme and a cap on numbers of students entering with FETAC qualifications.

This deliberate selection of FETAC students raises the points requirements of non-FETAC students and also allows higher numbers of FETAC students, overcoming the socio-economic disadvantage caused by requiring two honours for leaving certificate students. The FETAC courses provide a safety net and a route into higher education for students who are not academically qualified for the programmes when they complete second level education. Studying a training course in a cognate area may also positively impact on a student's goal commitment of gaining a particular qualification. As the early childhood care and education course is at level eight on the NFQ, a training course used to meet the entry requirements must be in a cognate area, and the computing courses are at level seven on the NFQ and the training course does not have to be in a cognate area.

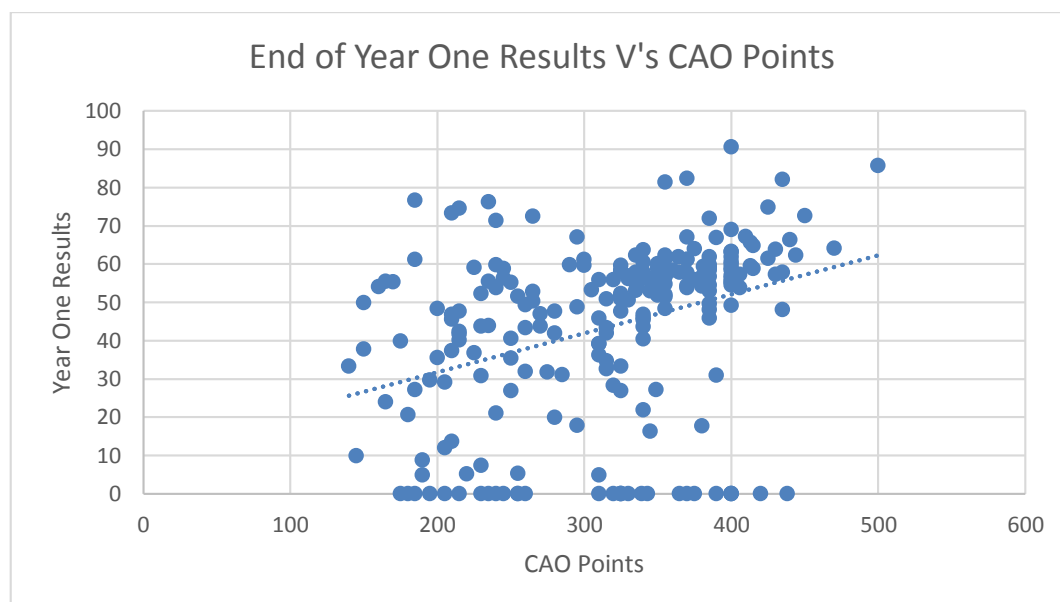
Alternative entry routes through training courses broaden access to programmes. Of the 125 students who responded, 50 students (40%) indicated that they were doing a FETAC training programme the previous year. FETAC programmes are generally specialist programmes of one year duration, and, for the early childhood care and education programme, the 34 students in this category had between 325 and 413 points, while for the computing programmes the 13 FETAC students had between 210 and 500 points. This could explain the lack of correlation between prior academic performance and parental socio-economic group. The FETAC students were further identified to understand the parental socio-economic class of the students. The FETAC students represent a higher proportion of students in the lower socio-economic classes and have the effect of raising the CAO points profile for these students.

#### ***CAO POINTS AND YEAR ONE PERFORMANCE***

The relationship between CAO points and year one performance is examined for both groups of students, and it can be seen that the relationship is approaching values of significance on the Sig. (2-Tailed) test (Table 11). When the programmes are considered individually, the high CAO points of the early

childhood care and education together with the high pass rates differentiate this programme from the suite of computing programmes. When the computing students are examined, there is a wider dispersion of year one performance and CAO points leading to a significant positive correlation between CAO points and year one GPA using the Sig. (2 Tailed) test. The students with less than 40% GPA, the passing standard, are mostly under 300 CAO points.

Where students have earned their CAO points from their results in the leaving certificate examination rather than from cognate training programmes, there is a significant correlation between CAO points and year one GPA, indicating that the better performing students are more prepared academically for the challenges of third level education.



**FIGURE 15: CAO ENTRY POINTS AND YEAR ONE RESULTS – ALL STUDENTS.**

### ***EXAMINATION PERFORMANCE***

There are also differences in the spread of results from both groups with the early childhood care and education results being higher within a lower spread of results. This may be an indication that the early childhood care and education students are academically more similar in profile and ability when compared with the computing students, and the lecturer can bring all students along the same educational path. This may be an indication that academic

supports are more important and need to be more targeted to students in the computing discipline. Also, the nature of an assessment may be a factor and the reliance of the programmes on continuous assessment or final examinations.

The diversity in the computing intake is also reflected in the diversity of the examination results, and the median and average GPA for the early childhood care and education students was higher, with higher pass rates. The maximum GPA for a computing student was 90.5, compared with 70.9 for the early childhood care and education students reflecting the diversity and higher entry points of the programme.

The current academic rules in ITS allow students to progress between stages of a programme carrying up to ten credits of failed elements, and as a result 95 students would have fully completed the requirements of stage one, 189 students would have progressed to year two, and 94 students would carry a failed element into year two.

#### ***PARENTAL EDUCATION***

The student surveys included a question about the highest level of education that their father and mother completed. The responses indicated generally a low level of parental educational attainment and, in many cases, the students were the first generation of their family to study at third level. Of the students that answered the question, 56 out of 76 (73%) parents of the early childhood care and education students did not progress to third level and 48 out of 85 (56%) parents of computing students did not progress to third level.

Therefore, this indicates that many of the students in the study are the first generation of their family to embark on third level education. These first generation students tended to have higher pass rates when compared with students whose parents had completed post-secondary education.

**TABLE 12: PASS RATES BY PARENTS HIGHEST COMPLETED LEVEL OF EDUCATION**

<b>Parental highest educational attainment</b>	<b>Overall for all students (%)</b>	<b>Pass rate (%)</b>
Did not finish secondary school	38.75	71
Finished secondary school	27.50	55
Did not finish third level	2.50	50
Trade / Apprenticeship	8.75	43
Higher / National Certificate (Level 6)	2.50	50
Diploma / Degree (Level 7)	3.75	33
Degree / Honours Degree (Level 8)	5.00	25
Masters - Post graduate qualification (Level 9)	1.25	0
Doctoral - Post Graduate Qualification (Level 10)	0.00	NA
Don't Know	10.00	50

When the pass rates are compared against maternal and paternal education, the results are remarkably consistent. The students whose father did not complete second level had a pass rate of 71% and the students whose mother did not complete second level education had a pass rate of 69%. This indicates that, in general, these students are not adversely impacted by the fact that their parents had not attended a third level institution. This, therefore, might indicate that the Institute may be having an effect on overcoming a shortfall in social and cultural capital of these students and that the habitus in the Institute is appropriate for the students.

Students whose fathers have not attended third level education would have better educational outcomes than students whose mothers have not attended a third level institute.

When the parental highest educational attainment of the students is compared with the 2011 census data for all people over 15, a higher representation of students' parents are on the lower levels of educational attainment when compared with the census data, with 25.8% of the general population having a third level degree or higher compared to only 6.25% of the students' parents

who have a third level degree or higher. The students in this category had a lower pass rate in the Institute.

**TABLE 13: IRISH POPULATION AGED 15 YEARS AND OVER, HIGHEST LEVEL OF EDUCATION COMPLETED 2011 CENSUS (CSO 2011)**

<b>Highest level of education completed</b>	<b>% of total population aged 15 and over.</b>
Primary	15.96
Lower Secondary	17.44
Upper Secondary	36.04
Third level non Degree	4.72
Third Level Degree or Higher	25.84

The programmes examined had differing admission profiles with a much greater diversity of ability present on the computing programmes. The outcomes were also diverse with the academic results particularly diverse on the computing programmes. This diversity poses challenges for the programme and how it is taught. Some students in the focus groups indicated that they were not able to keep up and the lecturers because the lecturers were under pressure to deliver the curriculum and did not have time to go over difficult concepts, while other students had no difficulty with the pace of learning.

Having a broad diversity of ability on a programme can disadvantage the stronger and weaker students and perhaps a range of entry points to the Institute could be considered to provide a range of programmes better suited to the applicants.

#### ***FIRST GENERATION STUDENTS***

There were also a high proportion of students who were the first generation of their family to attend third level and these were amongst the most successful students. This finding is against what is to be expected from the literature and may be explained by the particular mission and structure of the institute of



technology sector in Ireland when compared with the university sector, and its success in helping students overcome shortfalls in capital.

Students who have parents who have not attended third level may provide a strong motivation for these students to be successful at their higher education studies and the Institute, therefore, is successful in developing the potential of students who are the first generation of their families to attend higher education. Zembylas (2007) proposes that the circulation of emotional capital between students and teachers over time is systemically transformed into social and cultural capital in the classroom and thus empowering students. This, indicates the positive influence lecturers can have on student outcomes. Indeed, in the focus groups, many examples of staff empathy with students were given and these examples positively reinforced the students. In one case, where this empathy was not present, it had a detrimental impact on students from the lower socio-economic groups.

*“I stopped going to the classes as have others because of the way we were being treated.”* (Focus group one: P 6)

This demonstrates the potential to use student attendance as a diagnostic tool or as a measure of student engagement. This success is a combination of the motivation of students to succeed when provided with opportunities that their parents did not have and reinforced by the positive influences of lecturers.

It appears that, for many students, Bourdieu et al's (1979) cycle of reproduction is broken, probably by the transfer of capital from the Institute and its staff to the students and that the circulation of emotional capital between staff and students has been systematically transferred into social and cultural capital (Zembylas 2007).

### **4.3 MOTIVATION**

The students' motivation to engage at ITTS was measured using three student surveys and focus groups. The topics examined in this way were:

- sense of belonging;
- friendships;
- impressions;
- commitment to the course; and
- other factors were examined for impact on likelihood of academic success.

### ***SENSE OF BELONGING***

Students were asked in two surveys regarding sense of belonging. The sense of belonging encompassed a number of attributes such as the students' sense of community, their identity with the Institute and how successfully they adapted to college (The Social Issues Research Centre 2007). The sense of belonging, therefore, encapsulates how successfully the student settled into college life (Tomkinson et al. 2002). Responses were compared between surveys on an individual basis identifying changes in their sense of belonging. Of the students who responded in survey one, their answers were compared with their responses to the same question in survey two in order to determine if there was any change. The students also commented on their sense of belonging in the focus groups and, apart from one lecturer who showed lack of empathy causing some mature students to experience a lower sense of belonging and disengagement from the module, most students reported that their sense of belonging remained very positive. The data shows that for students on the programme in early childhood care and education a good sense of belonging persists as they progress. For the students on the computing programme in the initial survey, 32 students indicated a sense of belonging but this decreased by six in the second survey. Where students indicated a low sense of belonging, the explanations offered included homesickness and, in the case of mature students, a difficulty in adjusting to college life. However, overall it was determined that for those students who did not have a strong sense of belonging at the start of the course this had improved over time.

In the focus groups, some mature students referred to the extended Christmas and summer break as problematic as they had to readjust to college life afterwards, breaking family ties again. Factors identified for those with a strong

sense of belonging were that they had made friends, they enjoyed the new experience of college life, the lecturers were available, and they were enjoying the course. In the focus groups, students answered questions as to their sense of belonging at the commencement of the course and on their sense of belonging over time. There was evidence that their sense of belonging had decreased since the first year. When probed as to the reasons for this, there was evidence that this was due to the attitudes of lecturers who did not have empathy with the students' situation and did not treat them as individuals or offer to help them. However, the students gave many alternative good examples of good practice on relationships with staff. This indicates the need for awareness or staff training on the importance of good student engagement and the demotivating impact of bad engagement.

*"Motivation is often thought to be greater in more participative learning environments, both because of the sense of 'belonging' and also because students develop a feeling of being heard and, thus, valued"* (Tomkinson et al. 2002:P 213).

This sense of belonging, as defined by Tomkinson, was also described in a similar way in one focus group.

*"If you ask that man a question he is more than willing to help and stay back, which is fantastic."* (Focus group one: P 5)

For these students, they felt motivated by some lecturers and, when questioned as to the reasons, issues such as empathy and recognition came to the fore, highlighting the motivational value of good engagement and the demotivation value of poor engagement.

*"It is a bit degrading to be honest with you, like because, when you ask a question he would actually embarrass you"* (Focus group one: P 6).

This highlights the importance of positive staff engagement and empathy with students in realising positive outcomes for the students.

### ***INDUCTION***

The first impression of the most successful students was that they felt they belonged in ITS, felt the institution had a friendly atmosphere and found the lecturers friendly. The least successful students did not feel the induction process was “right”. This preliminary finding has been fed back to the registrar’s office and students who joined in September 2013 will be getting a better induction experience with centrally developed presentations and a dedicated administrator made responsible for the management of this important event. This revamped experience includes input from the students’ union, academic management, and also includes more opportunities for social interaction with a dedicated session for parents. As a result of feedback from the September 2013 induction, which was generally very positive, further changes were made to the induction programme for September 2014. A number of students felt that another induction event should be held in the first term. The survey also indicated that 86% of students would participate in an away day experience to allow students to meet and get to know each other better.

### ***CONFIDENCE***

The research shows the early childhood care and education students initially felt more confident than computing students. However, confidence improved in the second survey, particularly amongst the computing students. In the second survey, fewer students did not know what was ahead, giving more confidence as the course became more familiar to them. Students also had less personal issues. Also all of the respondents felt that they had some friends who would help them through the challenges of college. This increase in social capital is very important.

### ***GOAL COMMITMENT***

The number of students who did not know what sort of career they wanted to work in also increased from eight in the first survey to 23 in the second survey. This indicates that students were increasingly becoming unsure of the career choices and that they may have had some incorrect assumptions about the career options open to them in the first survey. This, perhaps, could be

addressed at pre-entry stage where the applicants are fully briefed on the sorts of careers available on the different courses. The uncertainty regarding career options may impact on commitment to the programme. The pass rate improves with higher commitment. This is to be expected (Tinto 1975). However, it is worrying that less than 50% of students rate their commitment as excellent.

### ***RELATIONSHIP WITH LECTURERS***

In terms of their relationship with lecturers, overall, the majority (two-thirds) of students found their lecturers to be supportive and friendly and these were the most successful students. Students who rated the relationship with the lecturers four or less out of seven had a significantly lower pass rate. In particular, for computing students the better the reported relationship with the lecturer the higher the pass rate. There does not appear to be a strong relationship between students and administrative staff. This is probably because of the low frequency and transitory nature of these interactions. Similarly, the quality of the relationship with the support staff and the relationship with technicians and other support staff does not impact on success rates.

The most important relationships which enhance academic outcomes are with fellow students and lecturers. At the end of semester one, a significant number of successful students felt there was a sense of community. This could be indicative of the friendships that the students have and the relationship with their lecturers. A high number of successful students also felt that they would be successful, had much in common with classmates who felt that they had a sense of belonging in ITS, felt that the college has a friendly atmosphere, and that the college had matched or succeeded their expectations. A majority of students found the lecturers friendly, felt the college had a friendly atmosphere and felt they belonged. Interestingly 81% of the students who felt a sense of community passed year one at their first attempt. This was investigated further in the focus groups and the participants from the lower socio-economic backgrounds with the lowest prior educational attainment, many of which were mature, felt that this sense of belonging was important and that they felt they belonged.

However, because of lack of empathy with one lecturer in the second year, they felt that this sense of belonging had diminished, highlighting the importance of staff empathy with students, particularly for those who were from a lower socio-economic background. This empathy that lecturers share with students is important for success and is perceived to exist for the majority of students. This was also reinforced in the focus groups where, in general, students were very happy with the level of interaction with staff. This was particularly important to mature students and students from lower socio-economic groups. Empathy with the students' circumstances and taking time to ensure that the students understand the materials covered and assisting where necessary was of particular importance. The computing students alluded to one staff member who did not display such empathy and this was hugely demotivating for students. The literature highlights the importance of staff empathy in transferring capital to students and this is a case in point. It is important that staff understand the need to make sure each and every interaction with a student positively reinforces their decision and reinforces the students' goal and institutional commitments.

It is important that when giving students feedback that it is done in a positive way to reinforce the students confidence, and not weakening the students confidence.

#### ***RELATIONSHIP WITH NON-ACADEMIC STAFF***

The relationship with the school administrators and centrally based administrators did not impact on academic performance with students who rated the relationship as two or six being the most successful and attracted a similar number of students.

The relationship with the library staff indicated that the most successful students rated the relationship as a six or seven with the computing students, in general, enjoying a better relationship with the library staff.

### ***FRIENDSHIPS WITH OTHER STUDENTS***

Friendships with other students are important indicators of academic success. Overall, students who reported their relationships with other students as supportive and friendly had significantly higher pass rates. Most students overall felt that other students were supportive and, apart from a small number of students who selected the mid-range value of four, most students who found the other students supportive were the most successful. The students with the lowest rates of academic success rated the support of the relationship with other students in the two to four band.

This may be attributed to the difference in gender between programmes but it gives a strong indication of the value of encouraging and supporting student friendships. In both student groups, the majority of respondents never struggled socially, and students who sometimes or often struggled socially did not have the same academic success. This highlights the importance of social capital in the habitus of higher education and with their peers. This social capital is important to the student success as the students build a social support network around them, highlighting the need to encourage friendships amongst students.

### ***CLUBS AND SOCIETIES***

A higher proportion of computing students engage in clubs and societies and, in the second survey, less students from the early childhood care and education course indicated a preference to join a club and society when compared to the first survey. In survey one, the computing students in a club or society performed better while, in survey two, the early childhood care and education students in a club or society performed better. However, despite the Institute having strong and well-resourced clubs and societies, there is no conclusive evidence that membership of a club or society enhances academic performance as overall the numbers participating appears low.

In the focus groups, the mature students in general felt that they did not have the time to take part in clubs and societies as they had family commitments in

addition to their studies. Therefore, consideration should be given to having appropriate social outlets for mature students and the recent appointment by the Institute of a students' union officer to support mature students is an important first step in this regard.

The Institute offers a number of sports scholarships each year for students playing sport at elite level. None of the students surveyed was in receipt of a sports scholarship.

### ***STUDENT COMMITMENT***

Students who rated their experience of the Institute as good or excellent perform strongly academically, and unsurprisingly students with a poor experience do not perform as well. When asked what you would do again, most respondents who answered the question would attend the same programme in ITS demonstrating a strong discipline and institutional commitment, while a number of the computing students would attend a different programme in ITS suggesting a strong institutional commitment with a lower commitment to their programme or discipline.

### ***WORKING IN PART - TIME PAID EMPLOYMENT***

Only a small number of students (28) were working in paid part-time employment, with 95 students not working, and the majority of the working students were working less than ten hours per week, with most of the students working only at the weekends. The students who worked more than ten hours per week at the weekend performed well academically. The financial security provided by such part-time jobs might be impacting positively on their studies. The small number of students who were working may be an indication of the deteriorating economy and high unemployment rates.

### ***KEEPING UP WITH STUDIES***

When asked if they struggled to keep up with their studies, most students who answered said they did sometimes. The students who struggled often or very often had low pass rates. This may indicate that some students may know if they are in difficulty and this may suggest the need for developing and targeting



appropriate interventions to students. It may be possible to encourage students who realise they are struggling to voluntarily undertake corrective action, particularly if they can be equipped with the skills and confidence necessary to engage with these initiatives.

When asked if the students had trouble understanding mathematics, the early childhood care and education students did not have a problem with mathematics. This was to be expected as there were no mathematics modules in first year of their programme. Most of the computing students who answered “sometimes” had difficulty understanding mathematics. However, the pass rate did not vary significantly between answers except for two students who answered “very often”. These students did not pass year one. This probably limits the use of this variable as a predictor of success. In the focus groups, the computing students commented positively on the empathy of the mathematics lecturer.

*“Purely because the method and how it is being taught and how thorough and relaxed and enjoyable it is in the main. It is amazing when someone can make something interesting and enjoyable.”* (Focus group three: 2).

The students were asked if they had difficulty understanding vocabulary and the answers indicated a difference between the two programmes. The majority of the early childhood care and education students who responded sometimes had trouble understanding vocabulary, while most of the computing students never had trouble understanding vocabulary. This could be due to the nature of the two programmes but also because of the differences between the entry requirements. Perhaps the students who enter through the training route are not adequately prepared for the rigours of academic study. This may be an indication that staff are not teaching at a level appropriate to the student cohort.

Staff awareness of the students’ difficulty in understanding vocabulary might result in changes in teaching methods or programme design which will be of benefit to students. In computing programmes, the majority of students did not have “trouble” understanding vocabulary, although students who sometimes or often had trouble have better pass rates, suggesting that students who had

issues understanding vocabulary may have worked harder to understand the material presented to them.

The majority of the students felt that their lecturers were good at explaining material so that they understood. However, for the computing students, this did not translate into academic success. The most successful students understood the lecturer's vocabulary, which highlights the difference between vocabulary and explaining concepts. While many students understood the concepts the lecturer was explaining, the more successful students also understood the vocabulary used. A minority of the respondents (three) felt that the lecturers understood them as a person. This may indicate the presence of a social or cultural divide between the students which only a small number overcame, highlighting a difference in capital between staff and students.

The focus groups and interviews investigated the student transition to higher education and the impact of this transition on their success. Students from the lower socio-economic groups particularly felt that they needed help getting to know their class mates and forming the initial groups. There may be issues about the social and cultural capital available to these students and it is important that they are supported in building networks. Formal opportunities to allow students to build these friendships should be made available in the early stages of programmes, for example group exercises focused on group tasks and students getting to know each other, particularly in the "learning to learn" module.

*"Everybody got to know each other and their weaknesses and their strengths and what you mightn't know somebody else might and vice versa."* (Focus group one: 7).

The building of understanding between students and helping students realise that they were not alone in feeling a lack of confidence, helped students form bonds and realise they were going through a shared experience, encouraging students to work together to achieve a common goal.

#### **4.4 STUDENT ENGAGEMENT AND APPROACHES TO LEARNING.**

Student learning styles were researched primarily via survey number three with follow up questions in the focus groups. The third questionnaire was based on “*The college student report*” which is a part of the NSSE as used in the US and Canada. The questionnaire included additional fields to capture aspects of the students’ department and course and questions that were not relevant to the Irish higher education system were excluded or modified. By analysing the responses, it was possible to score the approaches to learning (deep v’s surface), based on a number of criteria (Indiana University 2014) as follows:-

- effective teaching practices;
- collaborative learning;
- cultural capital;
- discussions with diverse others;
- high impact teaching practices;
- high order learning;
- quality of interactions;
- quantitative reasoning;
- social capital;
- student faculty interaction; and
- supportive environment.

Results were compared based on the following student attributes:

- programme of study;
- mature/non-mature students;
- mother’s socio-economic class;
- father’s socio-economic class; and
- prior educational attainment (CAO Points).

	ECCE Students (%)	Computing Students (%)	All Students (%)	Mature Students (%)	Non- Mature Students	Mothers Socio- economic Class (Low) (%)	Mothers Socio- economic Class (High) (%)	Fathers Socio Economic Class (Low) (%)	Fathers Socio Economic Class (High) (%)	Prior Educational Attainment (Low) (%)	Prior Educational Attainment (High)(%)
Effective Teaching Practices	54	49	52	54	51	52	50	53	49	53	51
Collaborative Learning	73	52	62	54	63	62	60	64	58	56	62
Cultural Capital	20	19	20	19	20	20	19	22	17	17	21
Discussion with Diverse Others	55	18	35	21	39	35	36	37	32	26	38
High Impact Practices	53	41	47	45	47	46	48	47	46	45	48
High Order Learning	59	50	55	52	55	56	52	57	51	56	53
Quality of Interactions	62	64	63	67	62	63	63	65	61	67	62
Quantitative Reasoning	70	75	72	71	73	74	71	74	70	78	70
Social Capital	17	21	19	16	20	18	21	22	15	23	19
Student Faculty Interaction	45	35	40	42	39	39	41	41	38	39	40
Supportive Environment	61	57	59	59	59	60	57	62	54	64	57
Average	52	44	48	45	48	48	47	49	45	48	47

**TABLE 14: STUDENT ENGAGEMENT**

Table 14 gives a composite value of different types of student engagement, based on the third student survey. The result was calculated for each student and then was combined to give values for different category of students. This breakdown gave the student engagement by various categories to understand factors that contributed to good student engagement and identified areas where student engagement could be improved.

#### ***COMPARISON BETWEEN PROGRAMMES***

This analysis has shown that the early childhood care and education students have scored higher on most of the metrics with the exception of quality of interactions, quantitative reasoning and social capital. The biggest differences were noted in diversity, collaborative learning, with higher scores noted for higher order learning and high impact practices. Students from both programmes had consistently lowest scores in social and cultural capital and student faculty interaction which point to issues about the students' perception of the quality of staff/faculty interaction. The overall rating of all students who responded for student/faculty interaction was 39.74%. This, therefore, shows that improvements could be made in the quality of student/faculty interaction.

#### ***COMPARISON BETWEEN OTHER ATTRIBUTES***

When the analysis of approaches to learning was compared with the other student attributes, there was very little difference between the responses. The main impact on the responses was the students' course of study. The data portrays that a student body that has low cultural and social capital but is experiencing some good educational practices find the environment generally supportive.

#### ***CLASS DISCUSSION***

While most students contributed to class discussions some of the time, the most academically successful computing students contributed often to class discussions and the most successful group of students sometimes contributed to class discussions. Contributing to class discussions and asking questions requires the students to have confidence and feel that it is a safe environment to discuss and ask questions. Classroom discussions may provide the potential

of an early warning system for students who are not confident and engaging in discussions. A classroom and teaching pedagogy should encourage open discussions amongst students and the lecturer.

### ***IN CLASS PRESENTATION***

Generally, the more often the students made a class presentation, the more academically successful they were. The early childhood care and education students mostly “made presentations often”, while the computing students made a class presentation “sometimes” or “often”. This indicates a difference in teaching and assessment strategies between the two programmes. The early childhood care and education programme, being a soft-applied discipline, was more suited to teaching and assessment through student presentations compared with the hard applied nature of the computing programmes. It is important that making a class presentation is a positive experience for the student and positively reinforces the students’ confidence and social capital.

### ***INTEGRATING IDEAS***

Similarly, when the students were asked if they worked on assignments which integrated ideas from various sources, early childhood care and education students were more likely to answer either often or very often, while the computing students were more likely to answer often. The more frequently the student integrated ideas from various sources, the more academically successful they were likely to be. The early childhood care and education students were also more likely to combine concepts from several modules.

### ***ANALYSING IN DEPTH AND CONSIDERING COMPONENTS***

The breakdown between the two student groups would be similar with some students in both groups agreeing with the statement that since September 2012 their ‘coursework emphasised synthesising and organising ideas, information or experiences into new, more complex interpretations and relationships’. The students who believe that they analysed in depth and considered components “very much” would have a higher pass rate but as the number of students who selected “very much” is so small the results are not relevant.

### ***SYNTHESISING AND ORGANISING IDEAS AND INFORMATION***

When the students were asked if they synthesised and organised information most respondents selected some or quite a bit. There is no consistency in the pass rate when compared with the answer selected. The answer indicates that students would probably need more guidance in organising and synthesising information; however, this would need to be course specific as the information needs of the different programmes and the techniques for organising data would be discipline specific and would be a requirement for deep learning. It would be expected that in the first year students would not experience deep learning but it would be expected in later years.

### ***JUDGEMENTS ABOUT THE VALUE OR QUALITY OF INFORMATION***

The answers the respondents gave to the question on how they made judgements on the value and quality of information is similar to the previous questions. There is no predictability of performance based on the answer to these questions, with most students in both class groups selecting some or quite a bit. The students however would need more guidance in understanding sources of quality information. Computing students mainly find their information on the internet and do not generally use the library for research purposes. This point was also reinforced in the focus groups by the computing students who felt that the most relevant and up to date information could be found on-line. There would need to be more emphasis on information quality in the curriculum, possibly in conjunction with the Institute librarians and the course boards working to find more relevant and up to date material possibly by using e-books and other on-line resources. Students would need to be equipped to evaluate the quality of information based on its sources.

### ***BACKGROUND READING***

Student engagement with non-recommended books was much lower than the student engagement with recommended reading. The category which most students selected was none. Again, there was no consistent pattern between the number of books read and academic success. The research indicates a disappointing level of engagement with reading, both of recommended texts or books for pleasure. The majority of students read between none and four

academic papers. Very small numbers of students had read more than five papers. There was no consistency between the number of papers read and academic performance. As first year students, particularly in computing, the students may not be exposed to high volumes of academic papers and written reports. The low numbers of papers read could be explained by a couple of factors. First year students would probably not require academic papers to complete their assignments and, in computing, because of the rapid rate of change of the discipline, many of the sources of information used would be on-line. The computing students in the focus groups also felt that they would not use the library book stock as they felt the most appropriate and relevant technical information was available on-line. This poses a challenge to the library to ensure relevance and promotion of their services to students and staff.

### ***DIVERSE PERSPECTIVES***

Differences in the programmes were highlighted when students were surveyed about considering diverse perspectives. The soft-applied humanities students experienced greater numbers of students including diverse perspectives in assignments and class discussions, while the hard applied computing students in general do not include diverse perspectives. This is to be expected as the computing programmes would focus on technology, while the early childhood care and education course would focus on a variety of topics including diversity.

### ***READING AND ASSIGNMENTS***

As can be expected, the students who come to class without completing readings or assignments have much lower pass rates. In computing courses, the most common group that “never” came to class without completing readings or assignments had a 51% pass rate, while for the early childhood care and education students, the most common grouping was “sometimes”. This could again be a factor of the discipline area as the hard applied computing students would probably not have as much reading in advance of class, and would more likely have to solve problems or other assessment tasks compared with the soft applied humanities students where there may be background reading expected before class. Class preparation could be an interesting measure of goal commitment as committed students would prioritise the completion of readings and assignments. The data therefore indicates that, if this was the case, the



early childhood care and education students have stronger goal commitment as a cohort.

### ***WORKING WITH OTHER STUDENTS***

The early childhood care and education students were more likely to work together in groups and pass rates were higher for students who worked with other students “very often”. The early childhood care and education would be mainly taught using tutorials of smaller groups supplemented by a weekly lecture. Early childhood care and education students were more likely to have worked with classmates outside class time. When both student groups are combined, students who very often or often worked with others outside of class performed better than those students who did not. When asked if the respondent studied with other students outside class time, the students who never studied with other students had lower levels of success. However, even students who sometimes studied with other students performed better as a group.

### ***USING ON-LINE TECHNOLOGIES***

Surprisingly, the early childhood care and education students had more opportunities to engage on-line than the computing students. From the response, there is no conclusive evidence that students who use on-line technologies are more successful academically. The focus groups highlighted the informal use of on-line technologies for students to collaborate outside the classroom.

### ***COMMUNICATION WITH LECTURERS***

The majority of students, overall, sometimes communicated with lecturers by email. Only a small minority of students never communicated with lecturers by email. This level of communication and interaction between students and their lecturers is very positive with only eight students or nine percent of respondents never communicated with a lecturer by email. Interestingly, the students with the lower pass rates discussed marks or assignments most with their lecturers. These interactions could be valuable in discovering why students are under-performing when compared to their peers. The most successful students never

discussed marks or assignments with their lecturers. However students in this category had only a 50% pass rate in computing. This highlights the changing nature of the work of the academic, with many students now corresponding with lecturers by email and seeking feedback.

#### ***DISCUSSION WITH A LECTURER OUTSIDE CLASS***

The students were surveyed on discussion of ideas with lecturers outside of class. The answers to this question were broadly similar to the previous question on communications. Only a very small number of students discussed ideas outside of class and the educational outcomes do not appear to be impacted by whether or not students discuss ideas with a lecturer outside class. The most students sometimes received was prompt feedback on performance from lecturers. The variety of answers seems peculiar as most students in the disciplines would have the same lecturers in class at the same time, and students may have differing expectations regarding what constitutes prompt feedback. A small number of students shared activities other than coursework with lecturers. The more frequently the students worked with lecturers on extracurricular activities the worse the academic performance. However, it is important to note that almost all students never worked with a lecturer on extracurricular activities so the small numbers who worked with lecturers render the findings inconclusive.

#### ***COMMUNICATION WITH OTHERS (EXCLUDING LECTURERS)***

The majority of students who sometimes discussed readings with others outside class performed the best academically. There is a difference between the disciplines and a higher proportion of computing students did not discuss ideas when compared with early childhood care and education students. This may be due to the specialist technical area of computing when compared with early childhood care and education where the topics may have more general applicability. The early childhood care and education curriculum would probably be of broader general interest when compared with the computing curriculum and there would be more opportunities to share and discuss ideas. Most students never had conversations with other students who were very different to them, and these were the most successful students. One computing student mentioned in a free text answer that he had discussions with a Muslim

student about his religious beliefs and that he found this interesting. The computing students are more likely to experience coursework which emphasises memorising material and, across both student groups, most students memorise facts sometimes or quite a bit indicating an emphasis on surface learning.

#### ***DISCUSSING CAREER WITH A LECTURER***

Most students never discussed their career plans with a lecturer. This is perhaps because during the first year of a programme students are not focused on their career. It is important that students have strong goal commitment, which can be positively reinforced by increasing student's awareness of the possibilities that a higher education qualification can bring. Embedding opportunities to discuss careers in the curriculum might be a useful tool in building goal commitment amongst students. Opportunities for the students to meet graduates and professionals would be key in reinforcing the students' commitment to their chosen discipline and career. In the surveys it was noted that students became less clear on their career pathway between surveys and by reinforcing the career pathway has the potential to improve course commitment.

#### ***APPLYING THEORIES OR CONCEPTS TO PRACTICAL PROBLEMS IN NEW SITUATIONS***

The students were asked if they applied concepts or theories to practical problems in new situations. The answers to this question were similar to the other questions on course work and there seemed to be no conclusive impact on academic success. The answers demonstrate very little high order learning as would be expected from a group of first year students. Programme design should have a progression of learning from low order to high order as students progress through the programme. As these students progress through their studies in later years of the programme, it would be interesting to revisit these questions again to identify if the students have experienced higher order learning.

#### ***PREPAREDNESS FOR LECTURES/SELF-STUDY***

Students were asked if they prepared in advance for lectures. Most students read one to four books and these were the most successful students overall. Surprisingly, there was no consistency between the number of recommended books that were read and academic performance. However, the answers to this question indicate a low level of student engagement with the recommended readings.

#### ***SELF-STUDY PROBLEM SETS***

The research examined the number and duration of problem sets that the students worked through outside class. Most students answered that they did one to two problems in each category, and, generally, it was found that the more problem sets completed the greater the pass rate. The next most popular answer was none. The students who selected none had a much lower success rate. It is important to reinforce to the student the importance of independent self-study.

#### ***EXTRA-CURRICULAR ACTIVITIES***

The students' participation in cultural, physical and spiritual extra-curricular activities was surveyed. The most successful students sometimes attended a cultural event, but most students never attended a cultural event. There is a need to promote and encourage more student engagement with cultural events. This is probably a function of the socio-economic background of the students. The most successful group of students participated in physical activity often, but the majority only participated sometimes. Almost 20% of the students never participated in physical activity. A majority of the students never participated in spiritual activity and these were the most successful group.

#### ***STUDENTS' INTENTION TO UNDERTAKE PLACEMENT, RESEARCH, VOLUNTARY WORK AND STUDY ABROAD***

The research investigated the students' intention to carry out a work placement, voluntary work, a research project or to study abroad. Work placement is a mandatory part of both programmes surveyed, and a large majority of students who are also amongst the most successful planned to do a work placement. Seven students had not decided and only two of these students had passed

year one of the programme. Perhaps these students do not intend to remain on the programme as the placement is in the later years. A number of students had already completed a placement probably as part of a training course undertaken in advance of attending their current programme. A number of students on the early childhood care and education plan to carry out voluntary work. All of the placements in this programme are unpaid and the students may regard these placements as volunteer work. A majority of computing students either did not plan to do or have not decided about voluntary work, while a majority of the early childhood care and education students either planned to do or had already done so. This demonstrates the difference between the two groups of students and their motivations.

Most students across both programmes planned to carry out a research project as part of the programme, while a minority of students on both programmes did not plan to carry out a research project. The students who planned to carry out the research project are the most successful.

The majority of students did not plan to study abroad; only 16 students on the early childhood care and education planned to do so. These are one of the most successful groups of the early childhood care and education students and may reflect the opportunity and motivation these students have to carry out their placement abroad and perhaps is an indication of greater cultural and financial capital amongst these students. The early childhood care and education students also have greater opportunities to study abroad as there would be a number of partner institutes overseas who provide placement opportunities while the computing students would generally be placed in local or national companies.

### ***CODE OF ETHICS***

When asked if ITS helped them develop a code of ethics, there were disciplinary differences to the answers to this question. Computing students developed fewer skills in developing a code of ethics when compared with the early childhood care and education programme. This is to be expected as the computing students developed more computing skills and the early childhood

care and education developed more skills and knowledge in developing a code of ethics, as the programmes included specific modules on ethics in early childhood care and education and skills based modules in computing.

### ***USAGE OF TIME***

The survey asked students how they spent their time in a typical seven day week. The question had a number of sub-categories and students divided their time across these. The answers provide a useful insight into the students' life and how they spend/manage their time. The largest and most successful group studied between one and five hours per week.

In programme design lecturers would design programmes around a total learner effort including contact time of 42 hours per week. This should equate to just under 20 hours per week of study and preparation. However, most students do not achieve this target, with the majority of them studying less than five hours per week. The students who did not study at all were not successful academically and no students who did not give some time to class preparation passed their programme at the end of year one.

The relationship between working for pay and passing was surveyed and the overwhelming majority of students did not work for pay, and these are the most successful students.

The 51 students who did not spend time on a club or society were the most successful students. During a week, 28 students spent time on a club or society. Spending over five hours per week on a club or society significantly impacts on performance. Students who spent over 16 hours were likely to be elite athletes and they had a very poor completion rate. This suggests that elite athletes who spend more than six hours per week on their chosen sport may have reduced academic performance and, therefore, their academic studies need to be supported.

The number of hours spent socialising per week does not appear to impact on academic performance, as long as it is not more than 30 hours per week. To accurately study how students' spend their time, a more suitable way would be to ask students to keep a diary of how they spent their time across a number of weeks. However, the answers provide a useful benchmark on students' perception on how they spend their time.

While most students do not have dependants, a minority of students spent some time looking after dependants and those students who spent more than six hours per week looking after dependants struggled academically as a result. The majority of students spent one to five hours per week commuting. Students were also asked how many hours per week they spent attending class. The programmes under study would have a weekly attendance requirement of under 25 hours. The students with the highest attendance appeared to have the best performance and academic success seemed to drop off dramatically when students attended class for less than 16 hours per week.

#### ***EMPHASIS AND SUPPORTS PROVIDED BY ITS***

Almost all students felt that ITS emphasised spending significant time on academic work, with most students indicating that ITS gave quite a bit of emphasis to studying. Many students felt that they got quite a bit of support. However, worryingly, 11 early childhood care and education students felt that they received very little support to succeed academically and these students had a much lower pass rate than other early childhood care and education students. Most students felt that ITS encouraged contact amongst students of different economic, social, racial and ethnic backgrounds. The numbers were remarkably consistent across both student cohorts and students who felt there was the most contact performed worst academically and vice versa. Most students felt that they got some support to cope with non-academic responsibilities, and there was not any relationship between the perceived support received and academic performance. Most students felt that the Institute provided some support to thrive socially but there is no relationship between this support and academic success.

### ***ITS'S CONTRIBUTION TO KNOWLEDGE, SKILL AND PERSONAL DEVELOPMENT OF THE STUDENT***

Most students felt that their broad general education increased quite a bit while in ITS but there is no relationship between this increase and their academic success. Most students felt that their work-based skills were developed quite a bit, and this is the same across both cohorts of students. There is no relationship between the students' perception of the improvement of their work-based skills and academic performance. Most students felt that their skills in writing effectively improved quite a bit and students who felt that the contribution to development in writing effectively was either quite a bit or very much performed better than students who selected some or very little. This was the same across both cohorts of students. The majority of students felt that ITS contributed to improving their speaking skills and more students in the early childhood care and education course felt that their speaking skills improved. The early childhood care and education students also felt that their analytical thinking improved very much while, overall, the majority of students felt that their analytical thinking skills improved quite a bit. Most students felt that their skills in using computers was improved very much or quite a bit, with the majority of computing students, as expected, replying that their computer skills improved very much.

Again disciplinary differences became apparent in the answers to the question on how students' developed skills in working with others. The early childhood care and education students have very much developed these skills while the computing students have developed them quite a bit. This may be because the early childhood care and education profession is more team-based and an indication of the team teaching style used by the academic staff on the programme. There would need to be an increasing emphasis on the importance of working together on the computing courses, particularly among the non-mature students. In the focus groups, the mature students gave excellent examples of working together outside the classroom. Interestingly, the students are not building as strong skills in working on their own, when compared to the answers given to the other sections.



Computing students developed more skills in solving complex problems when compared with their peers in the early childhood care and education programme. This may be explained by the disciplinary differences between the two groups of students. There does not appear to be any relationship between skills development in solving complex problems and academic performance. The nature of the course work on the computing programmes would be based around using technology to solve problems.

### ***THE ACADEMIC EXPERIENCE***

Most students rate the advice received from academic staff as good. Worryingly, however, 18 students felt that the advice received from academic staff was only fair. This may indicate a greater need for staff training so that they are equipped to give better advice to students or, alternatively not to give advice and to refer the student to a more appropriate information source if they are not confident in their knowledge.

Encouragingly, most students rate the academic experience as good or excellent, with only a small number rating the experience as poor. Greater understanding of the reasons behind the poor rating could help enhance the experience for all students. Despite the students who received fair advice or who had a fair academic experience, an overwhelming majority would go to ITS again.

For the computing students, the higher the perceived performance on the programme the more likely the student is to have completed year one. A perceived academic performance of under 80% for computing students leads to a much reduced pass rate at the end of year one. However for early childhood care and education students, they are successful at much lower levels of self-reported perceived performance.

## **4.5 STUDENTS PERCEPTION IN THEIR SECOND YEAR**

### ***INTRODUCTION***

The students' ongoing perceptions were measured in semi-structured focus groups towards the end of the second academic year. Care was taken at the start of each focus group to fully explain the role of the research and the background of the researcher, the ethical safeguards in place and the right of participants to withdraw at any stage. Also, the importance of not mentioning staff or students in a negative context by name was stressed. The focus group participants were supportive of the research project, had interest in it being successful and were agreeable to the recommendations being fed back to the Institute and thereby leading to improvements in the student experience. As a result of advanced preparation students engaged positively, openly and constructively within the focus groups. This advanced preparation was done through communication with the participants by email and at the start of each focus group. In addition, lecturers who engaged with the students in both years were asked to promote the research and seek student participation. Four focus groups were held and the focus groups were organised so that students from similar socio-economic and educational backgrounds were in the same group. This helped ensure that students in each focus group were comfortable in engaging with the discussions. The focus groups explored the reason the students chose the college and course, their perceptions of staff empathy, and events that positively reinforced their decisions to remain on the course. The focus groups also tried to understand the students' perception of their initial college experience and what could have made this better and also examined students' motivation to complete the programme. The focus group discussion guide is included in Appendix two.

### ***STUDENTS' CHOICE OF COURSE AND ITS***

Students selected their programme because it was in an area that they were interested in, felt they could better themselves or there were good opportunities for graduates. As students got older they were looking for opportunities that were more permanent. The Imagine Cup win also attracted one student.

*"If a college can win a world cup it has to be a good place to study"*  
(Focus group three: 1).

Many of the students took the option to change the focus of their degree selecting a different specialism to the one that they selected in the CAO. Students who changed their option felt that this was a very positive feature as that it took them the first year to get a full understanding of different options. There was some disagreement on this point as some students felt that it should be possible to change after semester one; however they all felt that the ability to change course was a very strong feature of the programmes.

*"I started in games, and the first month in I pretty much knew I wanted the systems option"* (Focus group one: 1).

They felt that it gave a second chance and if you made one bad mistake, you could change it. A number of students also remained on the same course that they initially selected.

Predominantly students chose ITS as they could live at home.

*"Well I could not really afford to go anyplace else"* (Focus group one: 2)

Participants also felt that it would be useful to have a breakdown of the course available in advance with the details of all the modules. One participant felt that having a three year level seven course was preferable to a level eight course of four years' duration

#### **WHAT STUDENTS FELT AIDED STUDENT RETENTION**

Students felt that coming to college for the first time was a daunting experience, particularly finding their way around the campus. The students also commented positively on other students and staff. However, some mature students felt that they should treat mature students differently recognising that they may be married, with children, having different priorities and were working late to try to keep up with course work. One mature student said:-

*"I have sat up till three or four o'clock in the morning trying to get a programme to work"* (Focus group one: 4)

Other mature students felt that some lecturers did not understand the challenges that mature students had, juggling family life and studies, but also highlighted excellent examples of staff engagement with mature students. One student encapsulated this difference in approach by lecturers.

*"You have a lecturer .... That actually makes you feel comfortable and some make you feel like a child."* (Focus group one: 5)

This is reinforced by another participant.

*"It is awful demoralising honestly"* (Focus group one: 9)

This contrasts with one student who commented positively on their experience.

*"It is amazing when someone can make something interesting and enjoyable"* (Focus group three: 2)

The importance of staff empathy and its impact cannot be under estimated.

*"But the moral of the story is we still remember (Lecturer X), what she done, and how she interacted with us and how we, you know what I mean, how she brought out the best of all of us."* (Focus group one: 13)

For mature students, it is important that the lecturer treats the students as individuals, has empathy with the challenges that they face and is willing to help them. Insights into the challenges of mature students trying to balance work and family life were given. One participant spoke about going on-line to chat to other mature students

*"Some of the boys will go home, make the dinner, whatever, do the kids homework with them, put the kids to bed, then around 9:00 and then come on for an hour, or an hour and a half, and we might have an exam that week or something like a CA so that we would practise and kind of chat to each other"* (Focus group three: 6).

This gives an insight to the challenges mature students have at the third level. Students also felt that the long break at Christmas and summer was problematic as they settled into family life and had to break the links with their families again. The students gave an example of a student with care responsibilities for a parent who did not return after the first Christmas break. Worryingly students gave examples where they stopped attending classes when they felt that staff did not treat them with respect and would not recommend the courses to their family as a result. This has potential to be used as a diagnostic tool if the attendance in one module is lower than the other modules the student is studying. The students also felt that this impacted on other classes because they were annoyed going into other classes and had difficulty concentrating. However, in general, students were positive about their experience. The importance of all lecturers having empathy was important. The issue of lecturers' treatment was only raised in one focus group which had predominantly older participants. In general, students reported that they settled in quickly in college, made friends and did not experience loneliness, and commented positively about their interaction with lecturers

*"I found it really easy to settle in, just came in like felt like home basically"*  
(Focus group one: 10).

Another participant in a different focus group

*"College is great I think, this college is brilliant, everyone is nice and helpful you know".* (Focus group two: 7).

#### **WHAT STUDENTS FELT COULD BE DONE TO IMPROVE STUDENT RETENTION**

Students commented that they did not use the library because the specialist software required for their programme was not available and that they mostly used on-line resources, in particular students felt that *YouTube* videos explaining concepts were better than books.

*"YouTube is really good for that, it is easier to see how it's done, not to read how to do it."* (Focus group four: 5)

This provides an opportunity to incorporate more on-line materials into teaching.

*“Last year I bought two books and I opened them like twice and other times using YouTube”.* (Focus group four: 6).

Most participants discussed how they worked together in groups with some students working on-site in the library in one of the seminar rooms, with mature students using on-line platforms that they set-up themselves to collaborate in the evenings, once their family commitments had been discharged. Students also discussed a number of technical issues around access to specialist software.

Students were also concerned that there were not enough practical opportunities in some of the modules and that, while there were opportunities to use simulation software, it was not the same as working on equipment. Also concern was expressed that with the pace of teaching sometimes lecturers progressed to new topics with students not having fully understood the current topic.

*“I feel that it is trying to get too much in a short time, ya and er are skipping over a lot of stuff”* (Focus group three: 3).

This contrasted with another lecturer’s approach,

*“They care more about you understanding it than actually getting through the stuff, that’s a better system”* (Focus group one: 14)

This highlights the importance of resourcing the module and delivering the material at a level and speed appropriate to the students. Also that all lectures should be fully resourced, an example being in year one when there was no web lecturer for a number of weeks. There were also comments made on the quality of Wi-Fi in the first year but this improved in year two, and difficulty at peak times in getting a computer in the library, with computer labs also well used with little capacity for individual student study.

### **HOW STUDENTS FELT ABOUT THEIR COLLEGE EXPERIENCE**

Students in general felt they were good attenders and that the lecturers were very easy to follow and they could understand the vocabulary used. The students also felt the volume of assignments was appropriate but the due dates could be better spread out to reduce pressure. The students had a preference for self-selecting fellow participants in group projects and they felt this would be fair.

*“I have to say it has been one of the most enjoyable experiences in my life, college life, it’s like mature students stick together”* (Focus group three: 5)

Participants formed groups early and supported each other.

*“One or two of the younger people, you kind of take them under your wing and help them”* (Focus group three: 6)

This resulted in increased social capital between these students.

### **WHAT COULD HAVE MADE THIS EXPERIENCE BETTER**

The students felt that there should be more opportunities to study where it was quiet. They felt that the library and restaurants in the college in general were too loud and it was not conducive to study and that students who wanted to socialise should go to restaurants rather than the library. The students also felt that if there was a larger gym with more equipment they would use it more. One participant felt that they were happy with everything and the facilities.

### **WHAT MOTIVATED STUDENTS TO COMPLETE THE COURSE**

Students were motivated to complete the course with the aim of getting a good job. Feedback from lecturers and availability of lecturers to give detailed feedback particularly later in the course when the students have built up confidence was important. Individual assignments were preferred by some participants as they did not want to be disadvantaged by being put in a group where some of the group members were poor participants. However, where

students could select their own groups this was less of a problem. Some students also felt that having completed so much of the programme, they would finish it, alluding to the possibility that there is a point at which students feel they have to complete the programme and that this is their motivation.

*"I don't think that I have come this far to contemplate not completing it".*

(Focus group two: 26)

#### **4.6 SUMMARY**

The study has examined a student cohort which has an over-representation of the lower socio economic classes and many of the participants are the first generation of their family to attend higher education. There are statistical correlations between prior academic achievement and paternal socio-economic group and GPA. Many students attend a training course to prepare them for higher education. Students are encouraged to attend higher education by a variety of sources and were generally motivated by the discipline area or the career path. Students who did not get their first choice place generally did not perform well and students interacted with the Institute in a variety of ways while making decisions on the course.

When the students attended college, they generally felt they belonged, had a good induction and were confident in their abilities to succeed. They generally had good relationships with lecturers and when these relationships were not good they had the potential to demotivate the students. Students made friends with other students and generally found these relationships useful and supportive. A small number of students worked and this did not appear to adversely impact on their studies.

Students were generally engaged, with the early childhood care and education students more engaged than the computing students. Students participated in class discussions and made presentations but the engagement with the recommended reading and self-study problem sets was generally poor. The students felt that their broad general education increased while at the Institute and skills were also developed in working with others and in analytical thinking.



As the students moved to year two, focus groups have revealed a student body which works well with other students, generally had enjoyable experiences but had the potential to be demotivated when there was a lack of empathy between lecturers and students. The students were motivated to complete their course and to get employment in their chosen field.

These findings indicate that the model has potential to identify strategies to improve student engagement. The students used the opportunities provided by the Institute to maximise their engagement. In general the faculty attributes of empathy and appropriate teaching styles helped to maximise the opportunity for students to engage.

The next chapters provide some general conclusions and recommendations.

## **5 CHAPTER FIVE - DISCUSSION AND RECOMMENDATIONS**

### **5.1 INTRODUCTION**

This chapter, using the student engagement model, considers how the Institute can improve the student experience and manage student completion rates. The chapter is structured around the four research questions. There is an extensive body of literature on both student retention and student experience. One focus of this literature is the link between the students' pre-college characteristics and their graduation rates which highlight the importance of various forms of capital and the organisational context. The model is an attempt to summarise the literature that is relevant to an admitting institution which has students from a lower socio-economic background, many of whom are the first generation of their family to attend higher education.

### **5.2 WHAT STUDENT PRE-COLLEGE CHARACTERISTICS IMPACT ON RETENTION?**

The student engagement - partnership triangle proposes a number of social and academic factors which may impact on student performance, achievement and retention. These factors include both social and academic factors. These factors were examined in detail.

The students who were analysed as part of this study are over-represented in the lower socio-economic groups when compared with the last national census of population in Ireland. The impact of this can be statistically relevant when the paternal socio-economic group is compared with the year one GPA, with students who have fathers from lower socio-economic groups not performing as well.

The study shows overall that there is no significant correlation between parental socioeconomic group and the prior educational attainment of students. However, within this cohort of students there are a number of distinct groupings who get their CAO points in a variety of ways leading to a distortion in the relationship between CAO points and parental socio-economic class.

The research found significant statistical correlations between prior educational attainment and GPA for computing students, where there was a wider spread of prior educational attainment when compared with the early childhood care and education programme and also a correlation between the parental socio-economic classification and performance. As there were differences between the two cohorts of students, the research indicated that, for certain groups of students, the relationship between paternal socio-economic group, GPA and CAO points would be a useful predictor of success. As the relationship did not hold for both groups, there needs to be an understanding of the data at an individual programme level to understand the predictors of success. This could be achieved by using IT systems which look back at student data and give this information to course boards and academic departments.

#### ***INTERACTION WITH THE INSTITUTE PRIOR TO ENTRY***

Students interacted in a number of ways with the Institute prior to entry and it is key that the marketing of the programme is appropriate and that the level of challenge or difficulty is not undersold. This marketing process needs to align with the institutional mission which sets out the institutional position in the market. As an example, if the Institute differentiated itself by focusing on widening participation, then its engagement with the community and its marketing efforts would support this objective.

The three most common contacts were the Institute web site which 94 students consulted, followed by the Institute prospectus which was consulted by 74 students, and 49 students attended the Institute open day. Of these, the students who consulted the prospectus were the most successful.

The analysis shows that most students would use between one and three different sources of information and students who reference two or three sources of information are the most successful academically as they have their commitment to the programme and Institute reinforced through a number of sources. Additionally, these students have researched their options prior to selecting the course. There is clear evidence that the information in both the prospectus and the web must be relevant and appropriate as they are factors

that most students use when deciding their course and choice of institution. Care must be taken not to oversell the course or undersell the level of academic challenge involved.

Also engagement with key decision makers who engage with prospective applicants is important in order to deliver accurate information regarding the level of difficulty of a programme and matching this with the appropriate students.

### ***DESIGNING PROGRAMMES APPROPRIATE TO THE STUDENT COHORT***

The research points to a greater need for institutional data at a programme level as there are significant differences between programmes and that there should be a match between the entry requirements of a programme and the design and delivery of the programme. Greater use should be made of the ladder system of entry to greater match student ability with the correct programme. This information would also have potential as a diagnostic tool, identifying examples of poor student retention and identifying potential causes in programme design and delivery.

A greater understanding of the attributes of successful students at programme level allows the Institute to take a number of corrective actions which improve student retention and the student experience. Firstly, the Institute can set the entry requirements such that only students that are likely to succeed are admitted. This has the disadvantage that it may deny opportunity to lower socio-economic classes who generally under perform in the leaving certificate examination. An alternative strategy is to predict where the students are likely to have problems in their engagement with the Institute, based on their attributes on entry, which can lead to reduced likelihood of retention. Understanding these problems in advance can allow a range of timely interventions to be put in place improving the student experience and retaining students.

The student engagement partnership triangle identifies the academic and social factors which impact on student retention and the findings support the key nature of these attributes to student success. These findings should inform the Institute's strategy with regard to the deployment of resources to maximise the engagement and success of students by providing sufficient academic supports to students, including appropriate programme design where necessary. How the Institute measures students' success and thus deploys resources will ultimately affect the Institute's impact on the student's performance, achievement and retention.

### **5.3 WHAT STUDENT POST ENTRY FACTORS IMPACT ON RETENTION?**

The aim of research question two was to investigate the students' motivation to succeed and their level of engagement. The students' perceptions of the Institute, programme of study, fellow students and staff were examined, in addition to the predominant teaching style of the programme, to understand the factors which impacted on student success. The research found that there was a number of different approaches to learning and that the approach varied by programme of study and student profile. As an example, mature students are less likely to engage in collaborative learning in the classroom. However, in the focus groups the students gave good examples of how they collaborated on-line and in the library outside class time.

There are differences between the two programmes in teaching approaches and attributes of enrolled students so it is not possible to make specific recommendations that would be applicable to all students. However, it is possible to make recommendations for institutional strategy and operational matters that can be considered at programme and department level. These participative learning environments should lead to greater motivation and belonging (Tomkinson et al. 2002).

The student induction is an important event and it should be supplemented by an additional induction event later in the first semester. Consideration should also be given to organising away days for all students in the first semester with

the aim of building relationships between students and staff in an informal setting.

### ***STUDENT ATTRIBUTES***

The student cohort would have a high proportion of students from the lower socio-economic groups, many with lower prior educational attainment and first generation of their family to attend third level. These students are influenced to attend third level predominantly by family and not by influences in education. There were differences between student profile on both programmes examined, highlighting that, in addition to global actions that can be taken, there are individual implications for programmes reflecting the entry requirements and its impact on profile.

### ***RECRUITMENT***

The interaction between the student and the Institute prior to the student joining the college is an important one. Care must be taken to ensure that the course is accurately described with a realistic and ethical marketing and setting of the entry standards, with teaching and student engagement appropriate to the minimum entry standards to ensure that students with the minimum entry requirements have the ability to complete the programme.

### ***BELONGING***

The research has shown that it is important that students feel part of the Institute and that they belong: This sense of belonging is fragile and can be negatively impacted by lack of empathy by staff. It is important that students feel that they are a part of the Institute and that they belong. Students that belong make the transition to third level and feel that they identify with the college and community. Students need to feel that they belong in the Institute and that a sense of community exists that they feel a part of. Consideration needs to be given to opportunities to engage students with other students who are not residential and to offer opportunities through staff empathy to increase the students' social and cultural capital.

It is important that this belonging is nurtured, allowing students to grow in confidence and reinforcing their commitment to their goals. It is important that a deep approach to learning is promoted, highlighting a strong student-faculty interaction, with a deep approach to learning-building in the generic transferable skills required of a graduate with the technical competencies of the discipline and a type and volume of assessment appropriate to the ability of the students. Building belonging, community confidence and commitment is key to achieve successful student engagement and helping retain students.

### ***CONFIDENCE***

As the students' sense of community grows and they make friends and settle in, their confidence in their abilities grows and they feel confident that they can complete their course. This confidence increases their commitment to the Institute's and their educational goal to complete their programme. Therefore, it is important that students feel they belong to the college community, grow in confidence and reinforce their commitment to their goals. This confidence is very fragile and care needs to be taken that every interaction with the student, and, indeed, programme design has the aim of increasing student confidence and their commitment to their graduate. The research showed that confidence grew over time, as they made friends and third level became more familiar to them. Staff have a key role in supporting and nurturing student confidence.

### ***COMMITMENT***

Over time the students' sense of community grows as they make more friends and settle in to third level and they become more confident in their ability to complete the course. This confidence increases the students' commitment to the Institute and their educational goal of completing the programme.

Building the students' sense of belonging and confidence will reinforce their goal commitment to completing the programme. Worryingly, less than 50% of students' rate their commitment as excellent and improving student commitment is a challenge. Building commitment to the Institute and programme starts before entry and is reinforced by building a sense of belonging and commitment prior to enrolment.

## ***ENGAGEMENT***

Engagement with the students must be appropriate, taking into account the ability of the students and with the aim of positively reinforcing the students' goal commitment. It is important that engagement is a positive experience for the students and that they engage positively and constructively with the Institute. The objective of student engagement should be to achieve high order learning leading to a deep understanding of the subject matter. On a personal level, students generally engaged well with staff and students and they found that this engagement was supportive.

Students generally found the relationship with lecturers positive. However, there were examples where mature students felt that the approach of some lecturers was not appropriate to their circumstances - eroding their sense of belonging and causing students to disengage from one module. Engagement is transitory, needs to be worked on and cannot be taken for granted.

This highlights the importance of a coordinated message appropriate to all students with a message from executive level valuing students, backed up with appropriate training and support from the academic council. Every interaction with students where possible should reinforce their goals and build the students' sense of belonging with a very strong customer service focus.

## ***FRIENDSHIPS AND COLLABORATION WITH OTHER STUDENTS***

This could be a significant challenge going forward as only a small number of students reside near the campus during term time and, as a result, there are less opportunities to work together as a group, particularly for mature students who have other commitments. Students should be encouraged and facilitated to work together in study groups. In the focus groups, this was particularly important for mature students, many of whom collaborated online in the evenings. The students also used the study facilities provided by the library, particularly for group work. Opportunities should be provided which encourage



students to form their own groups and students also had a preference that they would self-select the groups for assessment tasks.

As more students are commuting, these facilities are becoming increasingly more important and, while the computing students had the advantage that they had the technical capability, perhaps consideration should be given to educating students on how on-line technologies can be used to enhance learning and informal group work, creating new tools or educating students on how existing social media tools can be used.

This theme was explored further in the focus groups and many students use on-line methods to communicate in the evenings outside class. These students did not use a college medium for this and the development of a suitable platform for use by all students is something to consider which would provide students with the tools and skills to self-study, and encourage group work. The students in the focus groups also demonstrated other examples of social networks that they had built, including self-study groups and use of the library seminar rooms, and gave practical examples of where students used their networks to aid their learning bringing all students in the group along the learning journey together. In the first survey, all respondents made some friends and, when compared with later surveys, students also made more friends the longer they were in college and these students enjoy a strong academic record as they build their social networks and increase their social capital.

The importance of friendships was explored in the focus groups and, as mentioned above, practical examples of where this friendship included peer support and aid with studying was demonstrated. Activities which encourage students to build friendships early on would be valuable as most of the self-study groups were driven and led by mature students. Equipping non-mature students with the skills necessary to consider study options which would include peer study groups would be valuable as it was not clear from the focus groups that all students participated in an informal study group. Some students felt that the “learning to learn” module was very useful in imparting skills and insight

with the section on learning styles particularly useful as the students could understand their personal learning style and the learning styles of others.

This could be a reflection of the importance of working in teams in the early years of both programmes. However, in the later years of the programmes when the emphasis moves from team based projects to individual projects, students may not have the skills to cope and may become too dependent on the support of their peers.

The students also gave good examples of working together in the focus groups and portrayed a group of students who made friendships early on, studied together in college, interacted outside college using the internet and supported and watched out for each other. This good practice should be supported

The Institute has invested in improving library facilities with areas for group work and rooms where students could study with access to internet and screens for presentations. However, with the increase in numbers of students commuting, opportunities for group study may be limited for some students and it may be necessary to investigate virtual applications where commuting students have the same access to group work with other students as the students who live on or near campus.

There may be an opportunity to increase engagement with the library if on-line collaborative tools were provided to enable students to work together in a similar manner to the students who use the physical meeting rooms on-site.

### ***SELF-STUDY, EXAM AND ASSESSMENT CHALLENGE***

There needs to be more emphasis given to the students who work outside college as this is key to academic success. Also lecturers need to be aware of the need to positively foster a culture of study supported by issuing students suitable work outside class. This work also needs to be supported by tutorials and workshops where the students are taken through the problem sets.

Most students were challenged by their examinations and the few students who selected two or three performed excellently. This may indicate that the assessment and examinations are beyond the ability of the students. However, it may also be the case that students are not preparing adequately for assessment and finding them too difficult. This reinforces the need to encourage students to study and prepare for examinations. Students who are weaker may not fully appreciate the self-study work load that is required. The focus groups also highlighted problems with the timing of assessments; however, they felt that the number and level of the assessments was about right. Programme boards would need to be more pro-active in planning deadlines for assessments and considering the impact of the individual module assessments on programme delivery.

Feedback after assessment is key to motivate the students and increase their confidence. One unintended consequence of demotivational feedback would be rote learning (Marton et al. 1984).

In answering research question two, the findings are congruent with the student engagement - partnership triangle, portraying a cohort of students who have a sense of belonging and commitment to their programmes and who are engaged. There are opportunities to improve this engagement. The research identified in particular the following: opportunities for positive feedback, support for student collaboration, particularly for mature students who commute, and finally opportunities to improve staff perceptions and empathy.

#### **5.4 WHAT STRATEGY CAN THE COLLEGE DEPLOY TO IMPROVE STUDENT RETENTION AND CAN THIS BE TAILORED TO THE STUDENT / PROGRAMME CHARACTERISTICS?**

The student engagement - partnership triangle model recognises the importance of the Institute's strategy, culture and values in the student engagement process. The model recognises that the institute's strategy is framed by institutional drivers both externally and internally. The drivers externally are national policies, funding agency targets and requirements of quality agencies and internally the institute's culture and policies.

The Institute's strategic plan is informed by national policy and the Irish higher education strategy to 2030 (Strategy Group 2011). This strategy recognises that increased participation increases Ireland's capacity to generate jobs and provide a range of less tangible social and civic benefits such as a reduction in crime, improved health, living standards and better social cohesion, while recognising the importance of socio-economic equality, and the role of education as a force for individual growth, societal progress and cultural development. However, while the report recognises expanded opportunities achieving much for underrepresented groups, it also points to a disappointing lack of success in this regard when entry rates by socio-economic group are considered. A hundred per cent of the children of higher professionals enter higher education while the corresponding figure for the children of non-manual workers is 27%. For Ireland to be successful in an innovation-driven economy, it will be necessary to create and enhance human capital by expanding participation in higher education amongst the lower socio-economic groups. The supports required are not just financial; there is a need to address differences in tradition, social and cultural capital of this cohort.

The report also focuses on the quality of the student experience, recommending that students should be equipped with generic foundation skills.

*“Increased attention must be paid to core skills such as quantitative reasoning, critical thinking, communication skills, team-working skills, and the effective use of information technology” (Strategy Group 2011:P 35),*

with a strong engagement with individual students defining the student's experience of an education that is

*“Excellent, relevant and responsive to their personal development and growth as fully engaged citizens within society” (Strategy Group 2011: 27).*

These foundation skills have the potential to address the capital issues that students present with, particularly from the lower socio-economic groups.

Recognising the need for more data the report recommends that there is full, transparent data across the system with the implementation of a national student survey, backed up by a performance compact where institutes agree funding based targets with the HEA.

The Institute's strategic plan responds by setting key performance indicators (KPI) for increasing the student population and increasing the retention rate, after the autumn examinations. One of the five strategic pillars of the current strategic plan is student participation and experience. This recognises the values that the Institute prioritises: excellence in teaching, learning, research, engagement and support with equality of access for all, understanding the needs of the students and providing a quality and supportive environment that encourages students to become rounded graduates prepared for the world of work. These values ultimately drive the institute's allocation of resources.

This vision recognises that staff will be characterised by support for the student (IT Sligo 2013). While the Institute's strategic plan acknowledges the importance of student experience as one of the pillars, there are additional strategic actions that would bring the plan in line with the objectives of the strategy group.

### ***INSTITUTIONAL POSITIONING***

The Institute needs to position itself within the third level sector and, given the attributes of enrolled students, an appropriate position might be to champion widening participation. Stating the Institute's position in this way allows the Institute to resource and design programmes and other facilities with the objective of widening participation and enhancing the student experience. This would allow the Institute to differentiate its mission from the traditional university as it moves to university status, protecting the Institute's mission and values.

### ***INSTITUTIONAL RESEARCH***

The Institute needs a robust information system which tracks and monitors student engagement at a programme and department level, incorporating both institutional information and combined with a comprehensive anonymous student feedback system. This system has the potential to provide reliable accurate information at departmental and programme level, and to provide information which could be used for planning at programme level and provide ongoing diagnostic information on the progress of the programme in matching the mission and strategy of the Institute. Aggregate information could be provided at executive and governing body level to accurately report student retention figures at school and department level. This institutional research would give the Institute a panoramic view of students, staff, admission criteria, student attributes and student outcomes, with a richer understanding of the environment giving greater opportunities for student success. This would help position the Institute in the market place, examine correlations and assist in the development of marketing and pricing strategies (Hossler and Bean 1990).

### ***ENROLMENT***

The enrolment of students is a key strategic responsibility with the aim of attracting students who can succeed and, when the student's possibility of success is marginal, they either should not be recruited or supported through tutorial and study groups. Robust institutional research will assist in making evidence-based decisions in enrolments, examining the changing characteristics of the student body over time, using institutional research (Hossler and Bean 1990). The characteristics of the enrolled student body are integral in determining the quality and image of programmes and the Institute and influencing future enrolments becomes a self-fulfilling prophecy. Enrolment decisions have to balance the need for the resources that students bring against the quality, character and quantity of the student body and the institutional mission. The current institutional plan, while setting targets for an increasing number of enrolled students, does not detail priorities in how this can be achieved. Clearly, there are choices to be made regarding setting entry criteria, shaping the student body and providing the resources to support the students, maximising their opportunities for success.

As the number of students is expanded, there is potential to increase the student cohort from lower socio-economic groups. Consideration needs to be given to how this impacts on the capital available to the student cohort and how the Institute responds to this shortfall.

## ***MARKETING***

Effective marketing informed by strategy can control the characteristics and size of the student body. The marketing function will help deliver institutional strategic goals, shaping the characteristics and size of the student body. A number of students who had selected the open day as their only point of information for recruitment had poor outcomes. Care needs to be taken that the marketing of individual programmes is appropriate to the level of challenge involved and students' goals. Where the marketing effort leads to a mismatch between the goals of the student and the Institute's, it is a missed opportunity for both the Institute and the applicant. Marketing needs to be ethical and realistic, managing the student's expectation with the reality of the programme of study and the career path.

## ***INDUCTION***

Student induction has been expanded over the past two years to include parents and greater collaboration between central services and individual departments. Currently, induction takes two days and there is a focus on assisting students with grant issues with representatives from the grant-awarding bodies being present. The formal induction is supported with help desks, a student mentoring programme and a study skills booklet. Feedback from students in general felt that there should be an additional induction event in the first term, but that the induction process was about right. The students who were the focus of this research had their induction event in September 2012 and there have been many improvements in the induction process since. Consideration should be given to teambuilding as a component of induction and opportunities for the students to work together in teams with the aim of forming groups and support networks early.

### ***ONGOING SUPPORT***

Software has the potential to provide ongoing support and engagement of students and access to the students' enterprise management information systems has the potential to provide real time information which will warn the Institute of poor engagement with the Institute. As students engage with the Institute there is the potential to track and analyse this engagement building a picture of students who are engaged or disengaged. This can be implemented in a mobile app which gives students feedback and rewards for good engagement. Information that can be used to measure engagement would be attendance, student logon's to the campus network, logons to the student Wi-Fi network, entry to the library, borrowing history and engagement with the learner manager system. Disengaged students could be flagged and followed up quickly. A customer relationship management (CRM) should be developed to track and document each interaction with a student.

### ***BELONGING / COMMITMENT / ENGAGEMENT***

Implementing the recommendations will lead to a recognition of the ability of the students that are recruited, leading to an appropriate teaching and assessment strategy designed to encourage broad skills so the graduate can participate in the workforce and society. These recommendations will build the students' sense of belonging, leading to an increased confidence in their abilities reinforcing their goal commitment. The student's sense of belonging is fragile and it is necessary that every interaction with the Institute is designed to positively reinforce the student's goal and institutional commitment.

### ***BROADER EDUCATION***

The inclusion of generic skills required for effective engagement in society and the workplace is a recommendation of the national strategy for higher education to 2030 (Strategy Group 2011). Programme design should take into account the need to provide graduates with these generic skills. This has the potential to build student confidence.



## ***SUMMARY***

The external drivers which shaped the Institute's strategy through the use of performance metrics has gone some way to improving the institute's response to the challenges of student engagement and achievement. At the core of improving this response are strategic decisions which need to be taken regarding the deployment of the institute's resources and how the institute measures success. The student engagement - partnership triangle recognises the internal and external environments which act as drivers to change and, based on the literature, offers a number of suggestions for changes in the Institute's strategy, culture and values.

## **5.5 RESEARCH QUESTION FOUR**

### ***OPERATIONALLY, WHAT CAN THE COLLEGE DEPLOY TO IMPROVE STUDENT RETENTION?***

Research question four looks beneath the strategy to understand at an operational level what opportunities there are to support student engagement. The student engagement - partnership triangle offers a number of suggestions recognising the role faculty have in fostering an environment which supports student engagement opportunities and there are a number of operational initiatives that the institute can deploy to enhance the student experience and retention. There are a number of recommendations for the faculty, but also a recognition that additional resources need to be deployed in relation to information based decision making, marketing, mentoring and measurement of student engagement using information systems. These endeavours need to be supported by an institutional strategy which has as its focus student performance, achievement and retention.

### ***RETENTION POLICY***

The Institute retention policy May 14 (Hegarty 2014) recognises that a successful retention effort requires involvement from the total ITS community,

Many of the strategic objectives will require implementation at programme level. The research has highlighted differences between programmes and disciplines so that some actions will need to be personalised at a programme level to better suit the cohort of students that the Institute recruits.

### ***INFORMATION BASED DECISION MAKING***

The research has shown that, in many respects, there are differences between programmes, in the makeup and diversity of the student cohort, in the teaching styles and retention rates between programmes. However, there are a number of common challenges across programmes, the lower socio-economic makeup of the student cohort, non-residential students and challenges in students' goal and institutional commitment. The strategy will set the overall tone with regard to the makeup of the student body. However, there are significant operational actions that need to be tailored to suit individual programmes. In order to inform these operational actions it is necessary to make evidence-based decisions based on strong institutional research incorporating not only hard data on students but the softer data that can add colour and depth through the use of anonymous student surveys. Implementing a robust system of appropriate data at programme level supplemented by student input is key to informing planning and decision making at a programme and department level.

### ***PROGRAMME DESIGN***

The research identified that students come to third level with a variety of attributes and prior educational attainment. This is important because students from lower socio-economic backgrounds are more likely to also have lower educational attainment.

The ladder system allows a number of entry points to be defined at level six, seven and eight on the NFQ. These entry points can also be differentiated by entry requirements. Developing a variety of programmes at different entry points allows programmes to be designed and resourced to match the entry ability of students. This advantages not only the students with lower prior educational attainment where courses can be designed with the supports and tutorials built in to achieve success, but also allows programmes to be

developed to challenge students with good prior educational attainment and ability.

The focus groups found that some students were challenged by the pace of teaching on programmes while other students felt that they were being held back. This was particularly an issue on the computing programmes where students entered with a wide variety of prior educational attainment and achieved a wide spread in the GPA after year one.

A useful approach might be to band the entry criteria for students so that all applicants over 300 points would be offered a level eight programme, and applicants over 200 points offered a level seven programme, with applicants who have under 200 points offered a level six programme. This would allow the design of the programmes and their retention supports such that the programme would cater for the students recruited.

This approach would also allow the Institute to compete with universities by designing programmes and setting entry points that would be attractive to students with higher educational attainment. The strategy to 2030 report also had recommendations for programme design where it stressed that graduates should be capable of change and be constructive in the workplace and society. The report also had recommendations for ensuring alignment and balance between learning outcomes, pedagogy and assessment (Strategy Group 2011).

#### ***ATTENDANCE / ENGAGEMENT MONITORING***

Consideration should be given to supplementing the institutional research which would be by its nature historical, measuring and reporting events as they happen to measuring student engagement with the Institute in real time. At risk students would therefore be predicted based on the outcomes of previous students rather than the behaviour of at risk students. This may have the impact of demoralising students by singling them out for special attention without any assessment of their current engagement. While the institutional research is

useful in planning and helping to confirm the Institute's strategic enrolment targets, it could be considered a blunt instrument when dealing with current students. A better approach would be to monitor student engagement as discussed previously, giving feedback to the student on their engagement and providing appropriate targeted supports and interventions.

Motivated students engage with the Institute in a number of ways, and this engagement has the potential to be reported and fed back to the student and programme board, allowing targeted interventions to take place. This would require an investment in an information technology system which would capture parameters such as attendance, engagement with the library, Moodle and other services, and continuous assessment results. This would provide the potential of a real time measure of the students' engagement with the Institute and their learning. This would allow the at risk students to be identified with transparent measures and provide a catalyst for discussion and engagement with these students and allow interventions which have the potential to achieve successful student outcomes.

#### ***INFORMATION AT PROGRAMME LEVEL***

The Institute's retention policy recognises that the Institute does not currently have a definition of an "at risk student". However, it recognises that identifying student appropriate metrics would allow schools to identify trends and students who are possibly at risk. Student performance over time is key to identifying possible student trends. The policy supports an evidence based approach to focus and target retention efforts, allowing the sharing of data and experiences between programmes (Hegarty 2014). It has to be recognised that, without information systems and institutional research backed up with appropriate staff training and procedures, objective of tracking at risk students the retention policy will not achieve its objectives, with appropriate procedures in place to allow for the referral of students to particular services and supports. Implementing appropriate systems adequately resourced is a key component in improving student retention.

## ***SUPPORTING RECRUITMENT AND MARKETING***

The importance of recruitment and key influencers in the selection of third level course choice cannot be underestimated. The recruitment and marketing function needs to target students and the key influencers. The Institute's strategy and mission, together with institutional research, will identify the influencers. As an example, on school visits engagement with teachers and careers staff is equally if not more important than engaging with students.

## ***STUDENT MENTORING***

A pilot student mentoring programme has been rolled out over the past couple of years and the feedback from students has been positive. The mentoring programme consists of five lunchtime sessions which are facilitated by students from later years on the programme. As students may leave at any stage during their programme, it will be several years before it will be possible to statistically prove the value of the student mentoring programme. However, when the costs are considered (€50,000 per year) and the possible benefits, if two students who might otherwise have dropped out are retained to graduate at level eight, the costs will have been met by the revenue from the retained students.

## ***OPERATIONALISING THE STUDENT'S' SENSE OF BELONGING***

The students' sense belonging can be developed by providing students with opportunities to bond, develop relationships and build a sense of identity. This sense of identity can be achieved by incorporating opportunities for students to develop friendships. Suitable opportunities which have been operationalised in IT Sligo include the organisation of a number of team building events which require the students to travel off site to participate in the team building exercises. In these activities the students have to participate as part of a team and it is necessary for them to assume roles and communicate effectively. Other opportunities include taster sessions where students are introduced to a variety of sports and encouraged to follow up by joining one of the many clubs and societies on the campus. In addition, oactivities are organised which bring all the students across the years on a programme together on site visits and these provide an opportunity for the students to meet and build a sense of community. For these initiatives to be successful the events need to be of high

quality and an appropriate number of events need to be run to reinforce this sense of belonging throughout their studies.

### ***SUMMARY***

There are a number of improvements that the institute can make to improve student performance, success and retention. These actions flow from the student engagement partnership triangle and focus on building the students' sense of belonging as a member of a student cohort on a particular programme.

Additionally the institute needs to be cognisant of the student attributes and factors that impact on their motivation. Actions include programme design to match the student attributes, better use of information systems both to monitor student engagement and to use this student information to make informed decisions. Additionally the marketing effort needs to communicate the programme so that students understand what is required to succeed in a programme and this marketing effort will match applicants to the appropriate course of study.

Further developments and expansion of the student mentoring programme have the potential to maximise student engagement and retention, particularly when it is part of a robust retention policy backed up by the necessary operational plans and targets. The student engagement partnership triangle has the potential to suggest factors and actions that the institute can take to improve engagement and success.

## 6 CHAPTER SIX - CONCLUSIONS

### *INTRODUCTION*

The contribution of this thesis to research is the drawing together of student engagement literature and sociological literature, particularly research based on the writings of Bourdieu et al (1979) and their work on field and capital theory. Bourdieu's high level macro theories and the sociological research generally does not look at the micro application of the macro structures, although there is some work in this tradition, for example Bernstein. This research has its focus at the micro level where the students' aspirations and attributes interact with the Institute's structures and processes. This research proposes a model: "The student engagement - partnership triangle" which combines many of the existing models and theories to understand (particularly from the perspective of an admitting institution which has a student base primarily from the lower socio-economic backgrounds and first generation of students to attend higher education) the actions that can be taken to improve student performance, achievement and retention.

The context of this research is different to the UK and US in a number of respects. Ireland is only starting to move to a funding based model which is based on student success, supported by the gradual re-introduction of student under the guise of increased registration charges. The participation rates are much higher in Ireland with the consequences for the socio-economic makeup of the student body. The Irish Higher Education (HE) sector is much smaller than either the UK or US and would not have a large number of active researchers investigating the Irish HE system. One initiative to improve an understanding of student engagement - the Irish National Student Engagement Survey - has had limited participation and possibly should be supplemented by focus groups where the students are asked for their perceptions and opinion giving depth to the research.

This research has made a number of important findings and reveals an institution where students can be successful despite their SES; however, there is still much to be done.

Strategically the Institute needs to position itself as having a strong widening participation remit, focusing on the needs of the communities that it serves. This needs to be underpinned by robust institutional research providing appropriate and timely information to all levels of the organisation. The marketing and enrolment efforts should focus on building strong programme and institutional commitment amongst students reinforced by empathetic staff focused on student success. Programmes will need to include a broad education building not only the students' academic outcomes, but enhancing their social and cultural capital.

Operationally these strategic initiatives will be supported by policies which inform operational decisions. Programmes will need to be designed to fit the profile of the enrolled student. Early warning systems which measure student engagement should be implemented giving students feedback on their level of engagement, prompting corrective action, driving the student to make appropriate interventions. Opportunities for enhanced student support including mentoring should be considered.

If these recommendations are successful it should lead to student cohorts who are enrolled in appropriate programmes, have a strong sense of belonging supported with appropriate staff interaction. This will bolster their confidence supported by a fit between the student, their programme of study and the Institute. This will reinforce the students' commitment to the Institute and programme leading to an increased completion rate.

The findings are in line with what was expected from the literature. The findings confirmed the importance of the fit between the students and the Institute; however, there is more work to be done in this regard. The Institute is making good progress in graduating students from backgrounds with lower SES. Many students come to college having completed preparatory training programmes which help students from lower SES backgrounds with lower educational attainment to make the transition to HE. The findings also show that some



lecturers do not understand the students as a person and this lack of empathy has a potential negative impact on student engagement.

#### ***STUDENT INFLUENCES***

Students were influenced to come to third level predominantly by influences outside of education, they were interested in working in the academic discipline and students who joined a course which was a CAO preference performed better and interaction with Institute prior to joining was important. The interaction of the students with the Institute prior to joining was important with a meeting with a head of department having the most successful outcome, while students, particularly computing students who used the open day as a primary deciding factor, had the lowest success rates.

A number of factors which influenced the students to attend ITS were reported and were different for the two groups of students. For the computing students reputation was the most important followed by close to home. For the early childhood care and education students close to home and social life were the two most important factors. Clearly, the Institute is satisfying a need for students of the locality who study in an Institute of Technology for convenience or cost, particularly mature students, and students from the lower socio-economic classes.

The student's decision to enter higher education generally was primarily motivated by influences outside of education, but, where the influence was a school teacher, the student had a higher success rate and, if the student was influenced in selecting a course by another student, they had a much lower success rate. This highlights the importance of the role of teachers in student choice and the value that students place on professional knowledge.

#### ***STUDENT ENGAGEMENT***

Overall there is a need for improvement in effective teaching and high order learning. The student body would have low levels of social and cultural capital and be over-represented in the lower socio-economic groups. Notwithstanding this, the students found the institutional environment generally supportive and

experienced some good educational practices. Disciplinary differences between courses and staff mean that different issues arise. That may be programme or discipline specific so the solutions and training necessary may need to be targeted.

Staff should make more use of class discussion and presentation, building student confidence and commitment and include more combined projects between modules reducing workload and reinforcing the linkages between modules, with a focus on the career outlets for graduates of the programme. Assessment feedback should encourage students to do better with the feedback framed in a positive way to reinforce goal and institutional commitment.

Students significantly underestimate the time it takes to be a successful student. Students are not sufficiently preparing for lectures with an institutional expectation that students are working 15 - 20 hours per week, while most students report working five hours or less per week. As students are not expending sufficient time in their studies, they need support to understand the time and study commitment necessary to successfully engage in a third level programme.

Options for group learning and assessment should be exploited to prepare students for team working. However, this needs to be balanced with the need to also prepare students for individual work and to accept individual responsibility for outcomes. This mix of skills, both in group and individual work, will need help to ensure work readiness of the students. In the focus groups, there were examples of students interacting on-line. The Institute should provide technologies for students to work and collaborate remotely using virtual meeting rooms.

While the level of communications between lecturers and students is good, greater encouragement should be given to students to engage with their lecturers and suitable training of lecturers to appreciate the value of these

student engagements in supporting student confidence and belonging in the Institute and reinforcing the students' goal and institutional commitment.

The low level of student engagement with prescribed reading material is worrying, and consideration should be given to using materials that engage students and give them interesting and practical problems to solve in class. This engagement should include opportunities to analyse and synthesise information, building higher order skills, and support the building of innovative and creative assessments using problem based learning.

Students should be encouraged to build support networks through informal interactions with students, and student clubs and societies are one possible support mechanism. Students should be encouraged to take part in physical activities. The Institute should provide on-line alternatives to the excellent physical library with the aim of improving virtual group learning.

The library is also a useful resource which would have a role in developing information literacy and helping students to make judgements on the value and quality of information. However, there are challenges for the library as some students do not see the relevance of a library to their discipline.

There are disciplinary differences between programmes and interventions need to be discipline specific and targeted to ensure the greatest returns, with the aims of building belonging, confidence and commitment amongst the student cohort.

#### ***STUDENTS' PERCEPTIONS AFTER ENTRY***

The students' perceptions were examined from a number of different positions. Belonging, confidence and commitment and these were considered in the context of the relationships with staff and students. It is important that students feel that they are a part of the Institute and that they belong. Students that belong make the transition to third level and feel that they identify with the

college and community. As the students' sense of community grows and they make friends and settle in, their confidence in their abilities grows and they feel confident that they can complete their course. This confidence increases their commitment to the Institute and the educational goal to complete their programme. Therefore, it is important that students feel they belong to the college community, grow in confidence and reinforce their commitment to their goals. Building this confidence is key. It is important that students feel that they are a part of the Institute and that they belong. The institute should take every opportunity to positively enhance the student's confidence, reinforcing the student's goal and institutional commitment and opportunities for feedback should focus on positive rather than negative points.

This raises issues around staff engagement and a training need with the objective of raising awareness and encouraging usage of teaching practices which promote high order learning, high impact practices and collaborative learning giving good student engagement. With the roll-out of the Irish national survey of student engagement currently in its second year, similar data will eventually be available at programme and department level within the Institute. The areas identified for improvement are:

- awareness of the student's cultural and social capital,
- effective teaching practices,
- high order learning,
- student faculty interaction, and
- high Impact practices.

#### ***STUDENTS' PERCEPTIONS IN SECOND YEAR***

The findings, mainly through the focus groups, revealed a body of students that while feeling that college was initially a daunting experience, settled in well with the support of other students and staff, and who were confident that they could succeed on the programme. Mature students highlighted issues around lack of empathy with one staff member but, overall, were very positive about their experience. This cohort of students also had significant challenges combining their family responsibilities with their academic studies but had used innovative ways to support each other. The library was not used by the computing

students and this raises challenges for the library staff in engaging with this group of students who, because of the use of technology, do not see the relevance of a library. The students also felt that the general spaces were too loud and did not facilitate study. The pace of teaching was also a concern for some students who felt that some lecturers were progressing through material quicker than they could keep up. This has implications for programme design and resourcing and writing module syllabi.

### ***STRATEGIC ACTIONS***

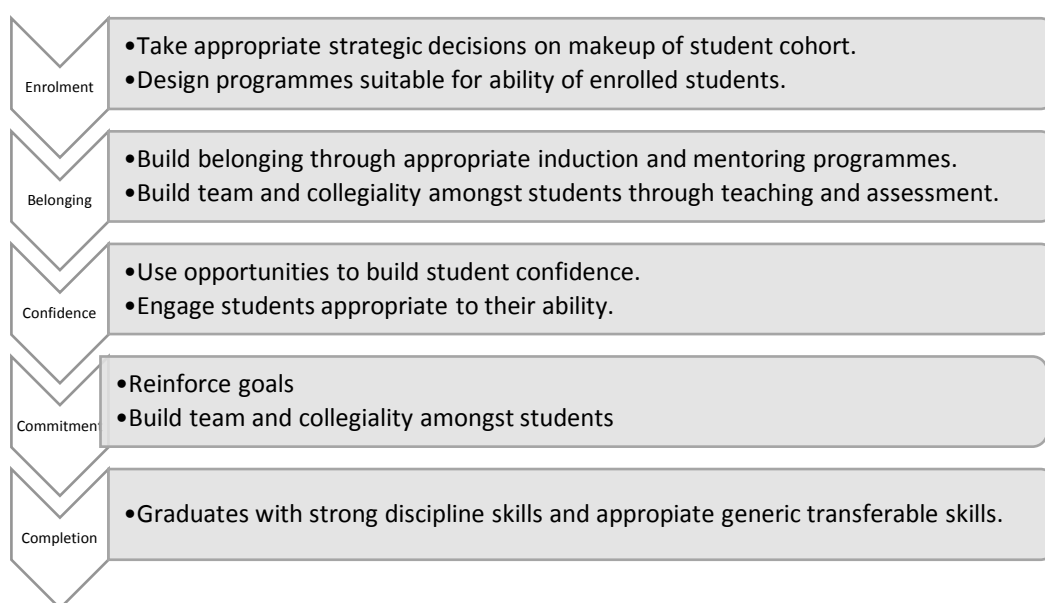
Successful student retention requires a match between the Institute's strategic intent regarding its mission and student population, supported by operational actions at department and programme level where programmes are provided which match the student's ability. This ability encompasses not only the natural gifts the student has, but also includes the capital (social and cultural) that the student brings to higher education. There must be a fit between the student and the Institute with institutional/student engagement appropriate to the needs of the student with suitable programmes of study with opportunities for student success and positive reinforcement of the student goals. Therefore, the solution is multi-faceted requiring input from management and staff at all levels in the Institute and buy-in from all staff to deliver a first class student experience which is supportive and reinforces the student's goal and institutional commitment at every opportunity.

The makeup of the student body is key and strategic decisions need to be taken to shape this makeup. The Institute has a large proportion of first generation students. This has implications for the available appropriate capital which these students have. These students have no tradition of HE and would have fragile programme and institutional commitment.

The makeup has implications for the mission of the Institute, the programme planning and staff training of the Institute. If the Institute, for example, decides to have a widening participation focus then supports, staff training and co-ordination at all levels to ensure that the student engagement is appropriate to this mission and its focus is needed to ensure the success and employability of

graduates. Alternatively if the Institute does not see a strategic role in widening participation, then different resourcing decisions will be made.

A model for action on the completion rates of students is proposed in Figure 16. This model builds on the research into the student engagement - partnership triangle and proposes a targeted approach across all stages of the student lifecycle.



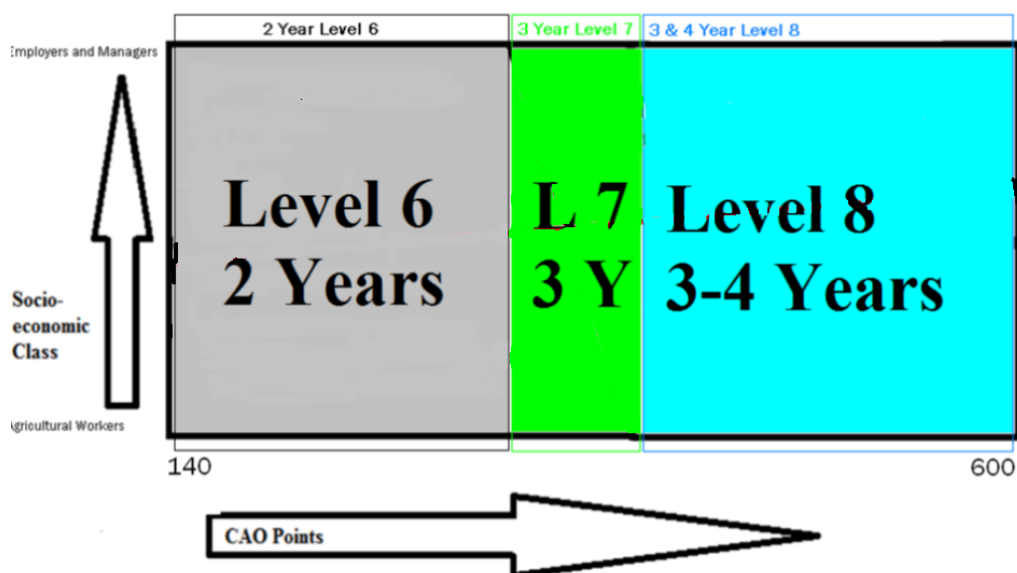
**FIGURE 16: MANAGING STUDENT COMPLETION RATES**

This has the potential to expand the literature as it links sociological concepts with student success and engagement. The student experience commences before the student joins the Institute with the enrolment process and Institute's strategy with regard to the makeup of the student body. The enrolment process must include marketing which is ethical and appropriate to the programme, and appropriate to the Institute's strategy and the target student attributes. Once students feel they belong, it is necessary to reinforce their institutional commitment through appropriate induction and mentoring processes offering opportunities to meet and develop in a collegiate environment which supports the students. This sense of belonging is fragile and care needs to be taken with every student interaction that the students' sense of belonging and institutional commitment is reinforced.

Teaching and assessment strategies should be used as opportunities to increase students' confidence in their ability, reinforcing their institutional commitment, with positive and timely feedback delivered in a supportive safe and positive environment. As the students' confidence builds and their sense of belonging is reinforced, the student will become committed to the goal of completing their course. This commitment can be reinforced by engagement with industry and graduates where the graduates can see themselves as successful graduates, and come to believe that successful completion is possible.

The culmination of these efforts should be a cohort of students who feel a sense of belonging and confidence and graduate with the essential skills necessary for employment and engagement in society as a full citizen. This success requires a clear strategy, defining the makeup of the student body (quantity and ability), with programme and department commitment to this strategy and this is reflected in programme design appropriate to the ability of the enrolled students using appropriate teaching, assessment and feedback strategies appropriate to the enrolled students, building their confidence and commitment to their personal goals. These actions need to be informed by robust institutional research and student feedback informing the Institute's strategic and operational decisions, ensuring that all students have an appropriate and positive student experience based on their pre-entry attributes.

In addition, the Institute should provide appropriate entry points to programmes based on the prior educational attainment of students, providing students with lower educational attainment programmes resourced to match their ability and potential, and also providing students with higher educational attainment access to more challenging programmes with an emphasis on self-study. This could be achieved within current structures where students with lower CAO points are enrolled on level six programmes and, as levels of prior educational attainment increase, students are recruited to level seven and level eight, with the programmes designed around the cohort and the prior educational requirements thresholds.



**FIGURE 17: ENTRY REQUIREMENTS AND PROGRAMME OFFERINGS**

In the example displayed graphically in figure 16, students with higher points are recruited onto level eight programmes of three and four year duration with students of lower points recruited onto level six and seven programmes. As there is national competition for students, for this approach to work institutes would need to collaborate in programme design and setting of admission requirements so that institutes are not competing to select students for programmes that are not appropriate to their prior educational attainment by lowering the admission criteria. While this approach has the advantage of allowing appropriate entry points for students and matching programme offerings to the diversity of students, there is the risk that certain students may be labelled as less able. It is important that steps are taken to negate this view and positively support each student to the level of their ability through appropriate teaching and support. There also may be underlying reasons such as diagnosed and undiagnosed learning difficulties. This approach matches the wide diversity and ability of the student cohort and should allow each student to reach his/her potential.

### **Change management**

The recommendations have implications for strategy and policy in ITS. It is important that they are supported by a robust change-management programme. There are a number of opportunities for change built into the Institute's planning cycle. The Institute's strategic plan is coming to the end of life. The Institute also has an upcoming institutional review by its awarding



body and there are a number of school programmatic reviews planned. Within these change cycles, there are opportunities to bring forward a phased approach to change such as Lewin's (1947) change model.

Organisational change tends to come from external pressure, rather than an internal need or desire to change with the need for greater employee participation in managerial decision making (Goodstein and Burke 1991). External factors, such as the changing nature of the student, massification of higher education and increasing focus on student retention matched to funding, all drive the need for change. These changes in the external environment are pressures to change.

The changes proposed must fundamentally change the organisational strategy and culture with a focus on a student-centred service-oriented organisation and a customer service ethos, where the Institute prides itself on the successes of its students and its staff.

For this transformation to be successful, it is important that some characteristics of the organisation do not change so that when the organisation is faced with what seems like enormous and complex change, staff have something to hold on to and an understanding of what will not change. For example, Lewin's three phase model of change - unfreeze, move, refreeze - where change can be conceptualised as movement from one steady state to a future steady state, with a period of transition or change (Goodstein and Burke 1991).

Higher education institutions differ from traditional businesses in a number of respects, when planning for change. Widespread ownership of change, building consensus and supportive collegial relationships are important considerations. With the greater confidence that comes with collegial sharing also comes a greater readiness to experiment and take risks (Knight and Trowler 2001). This collegiality supports consensus building and group decision making with group members involved in making their own decisions as a group (Lewin 1947). Shattock also recognises that collegiality is a more

effective management tool in universities than managerial direction (Shattock 2003). The challenge is to empower staff as a collegiate to recognise the need for change and to drive its implementation.

The methods of achieving this change include training programmes, using data to pinpoint required change and collecting the views of the organisation's members, responding to changes in the external environment to achieve a service-oriented and market-driven organisation making evidence-based decisions supported by collegiate decisions with agreement, where possible, reached by consensus with behaviour patterns that indicate greater interpersonal trust and openness with an open, participative management style which produces employee commitment and teamwork backed by the commitment and courage of top management (Goodstein and Burke 1991). This requires the president and executive management to trust and share the vision and information with staff and to take on board constructive feedback to reach consensus, where possible.

Lewin's three stage process requires the status quo to be unblocked usually following confrontation, followed by a retraining process. Steps are taken to cement these changes in place and freeze the change into a semi-permanent state. Managing the momentum may be more difficult than managing change (Goodstein and Burke 1991)

### **Cost benefit**

While these changes may appear to be expensive to implement, a number of policy changes have had the impact of tying student retention to Institute funding. The performance compact agreed by the HEA with the Institute ties Institute funding to strategic targets which include metrics on student retention. With the increase in the student registration fee, student success directly impacts on the fee income of the Institute and the Recurrent Grant Allocation Model (RGAM) funds the Institute and takes into account the aggregated student numbers, weighting depending on resource intensity of courses, weighting based on disadvantaged students with the institutional grant made

up of a standard per capita amount. This represents a shift from a cost based provision to funding based on the educational resource demands of the student population (Buckley 2010).

The impact of the performance compact and the RGAM funding model, together with the increase in the registration fee, have the effect of tying institutional funding to student success, particularly with students from lower socio-economic/disadvantaged backgrounds. Understanding the potential financial loss in revenue against increases in revenue from increased student engagement and completion, should support the need for the changes outlined.

### ***REFLECTION***

Student retention is a very individual phenomenon with many factors at play both for students, the programme of study and the academic staff/management deployed on the programme. Therefore identifying the most appropriate intervention for each student / programme is critical to the student's success. As enrolments to institutions increase and a higher proportion of the population progresses to higher education, old assumptions regarding the student cohort may not hold true. In particular, one consequence of massification is the increased participation of students from lower socio-economic groupings. This is particularly true for institutes like ITS where the student cohort is over represented by students from lower socio-economic background when compared to the national population census figures. The Institute is underrepresented in the higher socio-economic groups and over represented in the lower socio-economic groups. This is particularly true of the unskilled group where the number of parents in this category would be four times the national average. This research examined the impact of parental socio-economic background on student success, and provides recommendations on strategic and operational actions the Institute can take.

Internationally there is a large body of literature on student engagement and the student experience, however only limited work has been done in the Irish context in investigating student engagement and retention. This research attempts to address this shortfall by contextualising the literature in an Irish

institute of technology leading to a relevant understanding of the college experience from the perspective of the student and its impact on student retention. The student engagement - partnership triangle is a model which helps to explain the student engagement challenges and drivers in the context of an Irish institute of technology.

This research aims to provide practical and achievable strategic and operational actions which can be implemented in an Irish institute of technology. As Ireland moves to the massification of higher education with increasing participation rates, the institution needs to position itself with regard the student cohort it attracts. Does the Institute for example see that it has a widening participation mission and if so how is this reflected in the marketing, selection and engagement with students? Is the curriculum and its delivery appropriate to the ability of the students who are recruited on its programmes? Is the deployment of budget and other resources appropriate to the student cohort?

A clarity around Institute mission and strategy which informs marketing programme design, teaching, learning and student engagement is key. This top down approach will empower staff and programme boards to take the operational decisions to back up institutional strategy. The data generated in the institution will help with the process of domestication of the existing research.

The challenge for the Institute is to break Harker's cycle of reproduction of educational inequality (Harker 1984) through a range of change initiatives which will improve student retention and the student experience. Improved retention will lead to an increase in institutional funding and incentivise investment in measures which improve student retention, particularly for disadvantaged students. A change-management programme responsive to the external environment which creates a service-oriented and market driven organisation using institutional data to make evidence-based collegiate decisions with a participative management style characterised by trust and openness with staff commitment to the change process.

## **6.1 FURTHER RESEARCH**

While the research was limited to two cohorts of students in one year in one Institute, it raised interesting questions about the level of institutional research available in the Institute. The research shows that there is a wealth of data regarding the students' attributes prior to admission, their interaction with the Institute and their outcomes, but only limited use is made of this information at present. Other opportunities for research would be to carry out longitudinal studies comparing different intakes over time, comparisons between institutions and across the binary divide.

There are technical questions to be considered, such as the design of information systems which allow comparisons at programme level and, over time, allowing objective evaluations of retention initiatives and development of systems to provide information to departments and programmes on student performance, so that appropriate education and supports are provided to students to maximise opportunities for success. These systems have the potential to provide detailed information at a student level for programme boards with a dashboard overview for executive managers. Should real time information be made available to students advising them of shortcomings and how they might be overcome? This information could take the format of a game or mobile app where students get scored, feedback and rewards based on their engagement with the institute.

There are strategic questions such as looking at the Institute's strategic intent and how it shapes the Institute's branding and student body, and, indeed, any operational initiatives that result in this strategic intent which sets the Institute's engagement style. Interactions with students need to be managed with a customer service ethos across all student/staff engagements, which reinforce the institutional brand and strategy. This engagement should also include a fuller engagement with withdrawing students to understand from an institutional perspective whether there are any lessons to be learned, and from the student's perspective if there is any advice and support that can be given to the student.

The research on the student engagement - partnership triangle was carried out from the perspective of the student. Further work to explore this concept from the viewpoint of staff and the Institute's management would be helpful in fully validating the model.

## **7 CHAPTER SEVEN - MY DBA JOURNEY**

### **7.1 EXPERIENCE OF THE DBA**

The DBA is a professional doctorate with the aim of making a significant contribution to the students' professional practice (Huisman and Naidoo 2006). For me, this was indeed the impact it has had on my practice. I have become more student-centred with empathy for students and, from my experience in the DBA, I now take an evidence based approach and look to literature to better understand problems and issues in practice. My approach to problem solving is also more structured and reflective.

The cohort of students on DBA10 and the other cohorts were a great source of inspiration and assistance. I have found the DBA very satisfying personally and professionally, having had the opportunity to work with great peers from all over the world, who have been a great source of advice and support, and I am lucky to have them as friends as well as professional colleagues.

The taught modules exposed me to many of the current issues in higher education which I might not otherwise have had the opportunity to reflect. The lecturers on the programme also inspired me in many ways and were a positive impact on my practice. I feel that the DBA has been invaluable in informing my professional practice.

### **7.2 MOTIVATION**

My motivation for the topic of this research was based on my own experience initially on the DBA. At first I felt that I did not belong. In some sense, my social and cultural capital had not prepared me for this experience and there was a mismatch between this and the programme. As I got to settle into the programme and progress through reaching certain milestones, I began to have the confidence to believe that I could complete the programme. The cohorts of students were also key to helping me overcome my doubts in my ability to complete the programme. Based on my experience as a student of the programme, I tried to apply this to the incoming students in ITS, to understand

how they fitted with the Institute, to understand how they settled in, built their sense of belonging with the support of lecturers and colleagues, growing in confidence. By trying to better understand my difficulties, I want to turn this experience into a positive experience for students in ITS. I used this experience to explore issues around the student experience in my own Institute.

### **7.3 ASSIGNMENTS**

In my first assignment, *“Does a conceptualisation of “the Inheritors” by Bourdieu and Passeron help understand the retention issues in Institute of Technology Sligo?”* I examined the role of cultural capital and its impact on retention. I followed up this theme in my second assignment *“An exploration of different types of student engagement at the Institute of Technology, Sligo, with reference to disciplinary differences”* where I examined the experience and learning styles of students studying on different disciplines in ITS. My third assignment continued on the theme *“Predictors of Student Dropout: A study of factors relevant to student dropout in Institute of Technology, Sligo”* and building on the previous assignments I examined student dropout. My fourth assignment *“One size does not fit all: a targeted approach to student retention interventions.”* proposed a model to understand and predict student retention and the best outcomes for students. This model, while not pursued to dissertation, gave me the opportunity to present my ideas from my fourth assignment to the institutes of technology transitions conference *“One size does not fit all: a targeted approach to student retention interventions.”* (Presented to Institutes of Technologies Ireland (IOTI) Transitions Conference. 11 March 2013).

As the first of my family to get a master’s qualification, many of the reasons that I had for pursuing my master’s and doctoral qualification resonated with the degree students who were part of the study. I would hope achieving this milestone would encourage my nephews and nieces to develop their potential.

### **7.4 IMPACT ON MY CAREER**

Within the Institute I have seen value in certain activities and I chair the funding committee for the student clubs and societies as I feel that this is a very



important resource in helping students settle in and enhances their cultural and social capital. I also chair the information and consultation forum which is an information sharing forum where information is shared by management to staff representatives and consultation results. I believe this can be a positive agent for change in the Institute. I have also got more involved in the Institute retention committee and I also work closely with the students' union on a number of projects. All these relationships are as a result of studying in Bath and are helping to enhance the quality of the experience of the student population.

The DBA also has given me the confidence to accept additional responsibilities in the Institute and I am currently secretary to the academic council and its committees while the Institute is waiting for the new registrar to commence his duties early in 2015. I believe the skills, knowledge and insight that I have received during my studies has prepared me well for this task.

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## **APPENDIX ONE: STUDENT SURVEYS**

### **STUDENT SURVEY ONE**

Dear Student,

I am a staff member in the Registrar's Office in the Institute and I am completing an assignment for a post graduate course I am undertaking.

I am surveying student's experience of ITS and comparing it over time. I will also ask a number of questions to identify the student background.

All information will be treated confidentially and responses are not personally identifiable.

Thank you for taking the time to complete this survey. This survey will seek your opinions on the following:-

1. Your choice of course and your pre-admission experience.
2. Your first impressions of the institute.
3. Personal information / Information on the course you have selected.

This survey will inform part of my doctoral research. I am using this information to track changes in student's perceptions as they progress through their studies.

I have asked for your student number so I can relate the changes in perceptions as students' progress through their studies.

The information will be used in anonymous form and no individually identifiable information will be reported as part of my dissertation.

The findings may be fed back to the institute management with no individually identifiable information and inform recruitment and retention policy in the institute and may also impact course design.

If you would like to contact me about any aspect of this survey my email address is mbarrett@itsligo.ie and my phone no is 071-91-37313

There will be 4 prizes of €50 vouchers selected from amongst all responses. All students that include their student number will be entered into the raffle and I will email the successful students.

Kind Regards,

Michael Barrett

**Question 1 - What Choice in the CAO was the course that you are currently enrolled on?**

**Please select one answer only**

- 
- ☐ First Choice
  - ☐ Second Choice
  - ☐ Third Choice
  - ☐ Fourth or Fifth Choice
  - ☐ Sixth Choice or Lower
  - ☐ Don't Know
  - ☐ Does not apply

**Question 2 - Why did you select this course?**

**Question 3 - Why have you decided to go to Third Level / Higher Education?**

**Question 4 - Please Enter Your Student Number.**

I am using the student numbers to compare answers to questions over time regarding your impressions of the institute.

Entering your student number is not a mandatory question but it will make my research more accurate.

All the student numbers will be entered into a raffle for one of 4 €50 gift vouchers. I will contact the winning students by email to organise delivery of the prize.

**Question 5 - Course Duration**

**Please select one answer only**

If the institute had a course with a shorter duration say a 2 year higher certificate course would you have applied for this in the CAO, assuming this course had a progression path to an ordinary and an honours degree?

- 
- ☐ Yes, I would have put it at a higher choice than this course
  - ☐ Yes, I would have put it at a lower choice than this course
  - ☐ No, I have no interest in doing a shorter course for a lower qualification

**Question 6 - Prior to making your CAO choices did you do any of the following:-**

**Please select as many answers as apply.**

- 
- ☐ Contact Head of Department
  - ☐ Contact other ITS Staff
  - ☐ Use the website as a source of information
  - ☐ Use the prospectus as a source of information
  - ☐ Attend the college on open day
  - ☐ Attend the college other than open day
  - ☐ Did a staff member of the college attend your school and make a presentation

**Question 7 - What were you doing last year?**

**Please select one answer.**

- 
- ☐ I was completing my leaving certificate.
  - ☐ I was on a FETAC course.
  - ☐ I was offered this course previously and I deferred my place.
  - ☐ I was a student on the same course. (I am repeating now).
  - ☐ Other.

**Question 8 - Were you previously a student of ITS?**

**Please select one answer.**

- 
- ☐ Yes, I completed another course in ITS
  - ☐ Yes, I did not complete another course in ITS
  - ☐ No, this is my first time in ITS

If you answered yes above please give details of your previous experience of ITS.

**Question 9 - Currently I:-**

**Please select one answer.**

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- ☐ Feel I belong and have settled into college life
- ☐ Feel I do not belong and have not settled into college life
- ☐ Do not have strong feelings of belonging or not-belonging

**Question 10 - Please give more details on why you selected the answer to question 9 above.**

Please comment on anything positive that the college is doing, also please comment on things the college is not doing or things it is doing that impact negatively.

**Question 11 - Number of friends I have made since I came to ITS.**

**Please select one answer.**

---

- ☐ I have made many new friends since I came to ITS. (4 or more)
- ☐ I have made a small number of friends since I came to ITS. (1-3)
- ☐ I have made no friends since I came to ITS

**Question 12 - Do you intend joining a club or society?**

**Please select one answer.**

---

- ☐ Yes
- ☐ No - I have no interest in extracurricular activities.
- ☐ No - There are no clubs or societies that I am interested in.

**Question 13 - If there is a Club or Society that does not exist and you would be interested in joining please give details below.**

**Question 14 - If your course offered first years an away day experience to allow students to meet and get to know each other better, what do you think?**

**Please select one answer.**

- 
- ☒ Yes - I would be interested in attending such an activity
- ☐ No - I would not be interested in attending such an activity

**Question 15 - Any comment on question 14 above?**

Please give details of the sorts of activities that you would be interested in, or reasons why you would not be interested.

**Question 16 - What course are you enrolled on?**

**Please select one answer**

- 
- ☐ Bsc in Computing in Software Development
- ☐ BSc in Computing in Systems and Networking
- ☐ BSc in Computing in Web Design and Creative Media
- ☐ BSc in Computing in Games Development
- ☐ BA (Hons) in Early childhood care and education

**Question 17 - Please tick all the statements that you think are true. (Continued on next page).**

**Please select all answers that apply.**

- 
- ☐ I am a mature student - Over 23 on 1st January this year
- ☐ I live at home during the academic term
- ☐ I have a part-time job during the academic term
- ☐ One or both my parents have a third level qualification
- ☐ An older Brother or Sister studied at third level
- ☐ This is my first course in a University or Institute of Technology
- ☐ I have previously completed a FETAC course
- ☐ I am the first person in my family to have studied at third level
- ☐ I have positive role models who have encouraged me to attend third level education



- 
- ☐ My family were positive about my third level studies
  - ☐ My family were negative about my third level studies
  - ☐ I hope to receive a grant for my third level studies
  - ☐ I plan to join a club or society
  - ☐ I researched my third level courses before applying
  - ☐ I received my first or second choice of course
  - ☐ I am happy with my choice of course
  - ☐ In secondary school I always planned to go to third level education
  - ☐ I used the change of mind facility in the CAO

**Question 18 - What factors influenced your choice to attend ITS ?**

**Please select all answers that apply**

- 
- ☐ Reputation of ITS
  - ☐ I had to come to ITS as I was not able to attend a different college for personal or financial reasons
  - ☐ The facilities and campus in ITS
  - ☐ Close to home
  - ☐ The sporting facilities and sporting reputation of the institute
  - ☐ The social life in ITS / Sligo town
  - ☐ My parents / brothers and sisters influenced me
  - ☐ My guidance councillor recommended ITS
  - ☐ I did not want to be close to home
  - ☐ Friends are also going to ITS

**Question 19 - What influenced your choice of course in ITS ?**

Think about your choice of specific course

**Please click all that apply**

- ☐ Reputation of the course
- ☐ I liked similar subjects in school
- ☐ I am interested in the area of my course
- ☐ I wanted to do a different course in ITS which I did not meet the entry requirements for
- ☐ A know a previous student on the course and they recommended it to me
- ☐ I think there are good career prospects if I gain the qualification in ITS
- ☐ A visit ITS, meeting staff / students
- ☐ I looked at similar courses in other colleges but felt the ITS course was a better option for me
- ☐ The course duration / level was about right

**Question 20 - How useful and appropriate did you find the following in making your course selection ?**

	Not Applicable	Poor	Average	Good	Excellent
The ITS Prospectus	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The ITS Web site	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The ITS open day	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The ITS Facebook page	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
ITS staff at a recruitment events	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
ITS staff visiting your school	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Interview (If you are a mature student)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Previous Experience Of ITS (If studied here before)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

**Question 21 - Is there any advice that you would give ITS in marketing their programmes ?**

**Question 22 - Your first impressions of ITS ?**

Please think of your first impressions of ITS when you arrived and over the past days. I will be asking similar questions to see if your impressions changed over first year.

**Please select all the statements that you agree with.**

- ☐ I feel I belong in ITS
- ☐ I feel ITS has matched or exceeded my expectations
- ☐ I feel ITS has a friendly atmosphere
- ☐ I feel there is a sense of community in ITS
- ☐ I feel that I have a lot in common with my classmates
- ☐ I felt the campus was very large and that nobody cared about me.
- ☐ I find the lecturers friendly
- ☐ I find the administration staff friendly
- ☐ I felt the registration process was a positive experience for me
- ☐ I felt the student induction process was right
- ☐ My first impression is that I will be successful in ITS

Please feel free to give more details here if you disagree with any of the above statements

**Question 23 - Is there anything that you particularly like about your course ?**

**Question 24 - Is there anything the college should change about your course ?**

**Question 25 - Factors that may impact on completing the programme**

**Please select all the statements that you agree with.**

- 
- ☐ I feel confident that I will complete the programme
  - ☐ My Family are not supportive of my third level studies.
  - ☐ I do not know many people who went to third level so I don't know what's ahead.
  - ☐ I feel that the programme is harder than I thought it would be.
  - ☐ Financial issues could impact on my studies.
  - ☐ I have difficulty getting a part time job.
  - ☐ I feel I have no friends in college who could help me through.
  - ☐ I have personal issues which may impact me completing my studies
  - ☐ I am not interested in the programme as I did not get a higher choice programme.
  - ☐ The programme has different content to what I thought.
  - ☐ I don't know what sort of career I would like to work in.

**Question 26 - If you have any comments on Question 25 please enter them here.**

If you feel that there are other factors or would like to give more information, please enter it here.

**Question 27 - Attendance at college**

**Please Select one answer.**

---

- ☒ I attend all classes regularly.
- ☐ I attend most classes but I do not attend some.
- ☐ I do not attend classes regularly.

**Question 28 - Please comment on Question 27 above.**

If there is anything reason for non-attendance, or something that the college could do to assist you attending please comment.

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Please give your impression of student induction.

- ☐ I did not attend student induction
- ☐ I attended student induction and found it very useful
- ☐ I attended student induction and did not find it useful
- ☐ I think there should be another induction event during the first term

Other:

Please help us understand why you selected this answer

**Question 30 - Would you be interested in helping out more with my research?**

**Please select one answer.**

---

- ☐ No
- ☐ Yes - I would be interested in being involved in a Focus group of 15 - 20 Students
- ☐ I would be interested in a one-to-one Interview
- ☐ Yes but not sure how

**Question 31 - Is there any other information that you would like to add at this time?**

Please enter any information about any of the questions.

**Question 32 - If you have any issues of concern and would like to speak to me confidentially please give your phone no or email address here**

## STUDENT SURVEY TWO

Dear Student,

This is a second survey following up on a survey that you would may have completed earlier this year. For my first survey I had a prize and there were 4 lucky winners of €50 one for all vouchers.

As mentioned previously, I am a staff member in the Registrar's Office in the Institute and I am completing an assignment for a post graduate course I am undertaking. I am surveying student's experience of ITS and comparing it over time. I will also ask a number of questions to identify the student background. All information will be treated confidentially and responses will not be personally identifiable in my thesis.

Thank you for taking the time to complete this survey. This survey will seek your opinions on the following:-

1. Any issues which you may have which could impact your continuation on the programme.
2. Your ongoing impressions of the institute.
3. Confidence on your ability to complete the programme.

This survey will inform part of my doctoral research. I am using this information to track changes in student's perceptions as they progress through their studies.

I have asked for your student number so I can relate the changes in perceptions as students' progress through their studies.

The information will be used in anonymous form and no individually identifiable information will be reported as part of my dissertation.

The findings may be fed back to the institute management with no individually identifiable information and inform recruitment and retention policy in the institute and may also impact course design.

If you would like to contact me about any aspect of this survey my email address is mbarrett@itsligo.ie and my phone no is 071-91-37313

Kind Regards,

Michael Barrett

### Q.1

#### Please Enter Your Student Number.

I am using the student numbers to compare answers to questions over time regarding your impressions of the institute.

Entering your student number is not a mandatory question but it will make my research more accurate.

I will use this to cross reference against previous surveys.

### Q.2

#### What Course are you currently studying in ITS.

- ☐ BA (Hons) in Early childhood care and education
- ☐ Bsc in Computing in Games Development
- ☐ Bsc in Computing in Software Development
- ☐ Bsc in Computing in Systems and Networking
- ☐ BSc in Computing in Web Development

### Q.3

#### Was there someone in Education previously who was a strong influence in persuading you to go to college?

- ☐ No
- ☐ Yes - It was a Guidance Councilor
- ☐ Yes - It was a Teacher who influenced me
- ☐ Yes - There was an influence but it was not in education

Please help us understand why you selected this answer






#### Q.4

Were there any issues or problems that you encountered which may have caused you to think about dropping out of the programme?

- ☐ Yes
- ☐ No

Please help us understand why you selected this answer



#### Q.5

Have you applied for a student grant?

- ☐ Yes - I have applied and I have been awarded the grant.
- ☐ Yes - I have applied and I have not been awarded the grant.
- ☐ Yes - I have applied for the grant and I am still awaiting the result of my application.
- ☐ No - I have not applied for the grant

#### Q.6

Have you experienced hardship as a result of your grant being delayed?

- ☐ No - I have not applied for the grant.
- ☐ No - I got my grant in a timely manner.
- ☐ Yes - There was some hardship as I did not get the grant.
- ☐ Yes - There was a lot of hardship as I did not get the grant.
- ☐ Yes - I considered dropping out of the course because I did not get the grant.

### Q.7

Currently I:-

- ☐ Feel I belong and have settled into college life
- ☐ Feel I do not belong and have not settled into college life
- ☐ Do not have strong feelings of belonging or not-belonging

Please help us understand why you selected this answer



### Q.8

Number of friends I have made since I came to ITS.

- ☐ I have made many new friends since I came to ITS. (4 or more)
- ☐ I have made a small number of friends since I came to ITS. (1-3)
- ☐ I have made no friends since I came to ITS

### Q.9

Do you join a club or society ?

- ☐ Yes
- ☐ No - I have no interest in extracurricular activities.
- ☐ No - There are no clubs or societies that I am interested in.

## Q.10

Please tick all the statements that you think are true.

- 
- ☐ I am a mature student - Over 23 on 1st January this year
  - ☐ I live at home during the academic term
  - ☐ I have a part-time job during the academic term
  - ☐ One or both my parents have a third level qualification
  - ☐ An older Brother or Sister studied at third level
  - ☐ This is my first course in a University or Institute of Technology
  - ☐ I have previously completed a FETAC course
  - ☐ I am the first person in my family to have studied at third level
  - ☐ I have positive role models who have encouraged me to attend third level education
  - ☐ My family were positive about my third level studies
  - ☐ My family were negative about my third level studies
  - ☐ I hope to receive a grant for my third level studies
  - ☐ I plan to join a club or society
  - ☐ I researched my third level courses before applying
  - ☐ I received my first or second choice of course
  - ☐ I am happy with my choice of course
  - ☐ In secondary school I always planned to go to third level education
  - ☐ I used the change of mind facility in the CAO

### Q.11

#### Your current impressions of ITS?

Please think of your current impressions of ITS as you start the second semester. I will be asking similar questions to see if your impressions changed over first year.  
Please select all the statements that you agree with. If you disagree with a statement don't select it.


- ☐ I feel I belong in ITS
- ☐ I feel ITS has matched or exceeded my expectations
- ☐ I feel ITS has a friendly atmosphere
- ☐ I feel there is a sense of community in ITS
- ☐ I feel that I have a lot in common with my classmates
- ☐ I felt the campus was very large and that nobody cared about me.
- ☐ I find the lecturers friendly
- ☐ I find the administration staff friendly
- ☐ I felt the registration process was a positive experience for me
- ☐ I felt the student induction process was right
- ☐ My first impression is that I will be successful in ITS

Please feel free to give more details here if you disagree with any of the above statements



### Q.12

#### Is there anything that you particularly like about your course ?



Q.13

Is there anything that you dislike about your course ?

Q.14

Is there anything the college should change about your course ?

Q.15

Is there any information that you felt would be useful if the college made you aware of before you enrolled on your course?

Q.16

I have a sports scholarship from the ITS.

- ☐ Yes

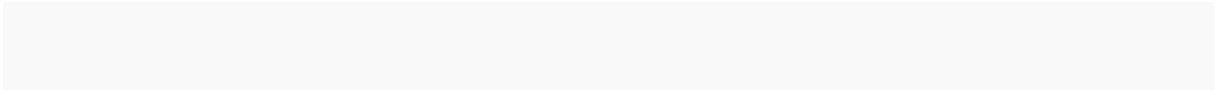
- Q.17
- Which best describes your current accommodation arrangements.

Which best describes your current accommodation arrangements.

- Q.18
- Overall how would you rate your experience in ITS

Overall how would you rate your experience in ITS

- Please help us understand why you selected this answer




### Q.19

If you had the option to decide again?

- ☐ I would attend ITS but on a different programme
- ☐ I would attend ITS on the same programme.
- ☐ I would attend a similar programme in a different institute.
- ☐ I would attend a different programme in a different institute.

Please help us understand why you selected this answer



### Q.20

Factors that may impact on completing the programme

- ☐ I feel confident that I will complete the programme
- ☐ My Family are not supportive of my third level studies.
- ☐ I do not know many people who went to third level so I don't know what's ahead.
- ☐ I feel that the programme is harder than I thought it would be.
- ☐ Financial issues could impact on my studies.
- ☐ I have difficulty getting a part time job.
- ☐ I feel I have no friends in college who could help me through.
- ☐ I have personal issues which may impact me completing my studies
- ☐ I am not interested in the programme as I did not get a higher choice programme.
- ☐ The programme has different content to what I thought.
- ☐ I don't know what sort of career I would like to work in.

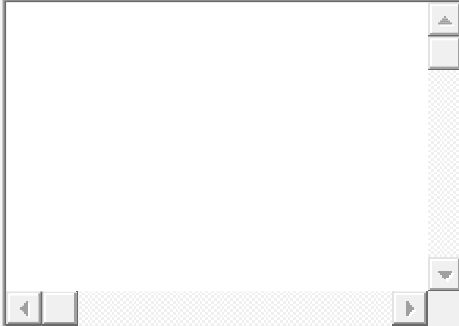


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Q.21

If you have any comments on the previous question (Factors impacting programme completion) please enter them here.

If you feel that there are other factors or would like to give more information, please enter it here.



Q.22

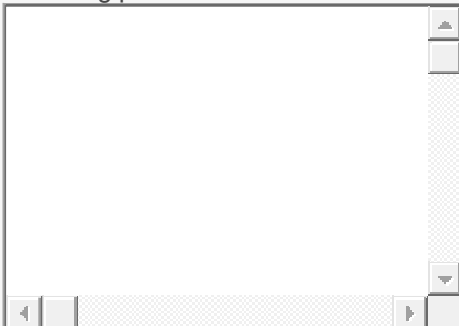
Attendance at college

- ☐ I attend all classes regularly.
- ☐ I attend most classes but I do not attend some.
- ☐ I do not attend classes regularly.
- ☐ My attendance has improved since I started in September
- ☐ My attendance has got worse since I started in September

Q.23

Please comments on attendance please enter them here.

If there is anything reason for non-attendance, or something that the college could do to assist you attending please comment.





Q.24

How would you rate your commitment to completing your course?

- ☐ Excellent
- ☐ Good
- ☐ Fair
- ☐ Poor

Q.25

Would you be interested in helping out more with my research ?

- ☐ No
- ☐ Yes - I would be interested in being involved in a Focus group of 15 - 20 Students
- ☐ I would be interested in a one-to-one Interview
- ☐ Yes but not sure how

Q.26

Is there any other information that you would like to add at this time?

Please enter any information about any of the questions.

A text input area with a small icon in the top right corner and a scroll bar on the right side.

### Q.27

Please describe your relationship with other staff and students.

	Very Unsupportive, Unfriendly	Unsupportive, Unfriendly	Somewhat supportive and Friendly	Supportive, Friendly
Lecturers	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Other Students	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Admin Staff	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Student Support Staff	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Students Union	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Technicians and other staff.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

### Q.28

During the year I felt that I,

	Very Often	Often	Sometimes	Never
Academically struggled to keep up.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Trouble understanding Maths	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Trouble understanding English Vocabulary	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Struggled Socially	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Did not make friends	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Lecturers did not understand and appreciate problems and issues I was having.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Q.29

Regarding my lecturers in general, tick which of the following apply:-

- ☐ In general my lecturers are good at explaining things so that I understand them
- ☐ I understand the vocabulary and language that lecturers use.
- ☐ I feel that lecturers understand me as a person
- ☐ I feel that I could confide in my lecturers if I had a problem on the course and I believe the experience would be positive.

Q.30

Do you have any comment on the suitability of your timetable?



Q.31

Do you have a part-time job.

- ☐ No
- ☐ Yes less than 5 hours per week
- ☐ Yes between 5 and 10 hours per week
- ☐ More than 10 hours per week
- ☐ My part time work is mainly at the weekend
- ☐ My part time work is mainly in the evenings

Q.32

If you have any issues of concern and would like to speak to me confidentially please give your phone no or email address here.



Dear student,

Thank you for taking the time to complete this survey. Your assistance has been most appreciated. If you would like to contact me about any aspect of this survey my email address is [mbarrett@itsligo.ie](mailto:mbarrett@itsligo.ie) and my phone no is 071-91-37313

Kind Regards,

Michael Barrett

## STUDENT SURVEY THREE

Dear Student,

I am a member of staff at the Institute of Technology Sligo and I am studying for a post - graduate qualification in The University of Bath.

I very much appreciate the time that you will take to complete this survey. This is the third of three surveys that are targeted at Computing and Early childhood care and education Students. I would like to thank the students who completed the previous surveys and thank you for taking the time to complete this survey.

Kind Regards,

Michael Barrett.

**Q.1**

Since Sept 2012, have you asked questions in class or contributed to class discussions?

- ☐ Very Often
- ☐ Often
- ☐ Sometimes
- ☐ Never

**Q.2**

Since Sept 2012, have you made a class presentation?

- ☐ Very Often
- ☐ Often
- ☐ Sometimes
- ☐ Never

**Q.3**

Since Sept 2012, have you worked on an assignment or project that required integrating ideas or information from various sources?

- ☐ Very Often
- ☐ Often
- ☐ Sometimes
- ☐ Never

**Q.4**

Since Sept 2012, have you included diverse perspectives (different races, religions, genders, political beliefs, etc.) in class discussions or written assignments?

- ☐ Very Often
- ☐ Often
- ☐ Sometimes
- ☐ Never



**Q.5**

Since Sept 2012, have you come to class without completing readings or assignments?

- ☐ Very Often
- ☐ Often
- ☐ Sometimes
- ☐ Never

**Q.6**

Since Sept 2012, have you worked with other students on projects during class time?

- ☐ Very Often
- ☐ Often
- ☐ Sometimes
- ☐ Never

**Q.7**

Since Sept 2012, have you worked with classmates outside of class time to prepare class assignments?

- ☐ Very Often
- ☐ Often
- ☐ Sometimes
- ☐ Never

**Q.8**

Since Sept 2012, have you put together ideas or concepts from different modules when completing assignments or during class discussions?

- ☐ Very Often
- ☐ Often
- ☐ Sometimes
- ☐ Never

**Q.9**

Since Sept 2012, have you studied with other students in groups outside of class time?

- ☐ Very Often
- ☐ Often
- ☐ Sometimes
- ☐ Never

**Q.10**

Since Sept 2012, have you taken part in a community or work based project as part of your studies?

- ☐ Very Often
- ☐ Often
- ☐ Sometimes
- ☐ Never

**Q.11**

Since Sept 2012, have you used an on-line medium to discuss or complete an assignment (Moodle, on-line discussion board, Facebook etc.)?

- ☐ Very Often
- ☐ Often
- ☐ Sometimes
- ☐ Never

**Q.12**

Since Sept 2012, have you communicated with lecturers by email?

- ☐ Very Often
- ☐ Often
- ☐ Sometimes
- ☐ Never

**Q.13**

Since Sept 2012, have you discussed your marks or assignments with a lecturer?

- ☐ Very Often
- ☐ Often
- ☐ Sometimes
- ☐ Never

**Q.14**

Since Sept 2012, have you discussed career plans with a lecturer?

- ☐ Very Often
- ☐ Often
- ☐ Sometimes
- ☐ Never

**Q.15**

Since Sept 2012, have you discussed ideas from your studies or classes with lecturers outside of class?

- ☐ Very Often
- ☐ Often
- ☐ Sometimes
- ☐ Never

**Q.16**

Since Sept 2012, have you received prompt written or verbal feedback from lecturers on your academic performance?

- ☐ Very Often
- ☐ Often
- ☐ Sometimes
- ☐ Never

**Q.17**

Since Sept 2012, have you worked harder than you thought you could to meet a lecturer's standards or expectations?

- ☐ Very Often
- ☐ Often
- ☐ Sometimes
- ☐ Never

**Q.18**

Since Sept 2012, have you worked with lecturers on activities other than coursework, (committees, clubs, societies, activities etc.)?

- ☐ Very Often
- ☐ Often
- ☐ Sometimes
- ☐ Never

**Q.19**

Since Sept 2012, have you discussed ideas from your readings or classes with others outside of class (Students, family, friends etc.)?

- ☐ Very Often
- ☐ Often
- ☐ Sometimes
- ☐ Never

**Q.20**

Since Sept 2012, have you had serious conversations with students who are very different from you in terms of their religious beliefs, political opinions, or personal values?

- ☐ Very Often
- ☐ Often
- ☐ Sometimes
- ☐ Never

**Q.21**

Please include any comments based on the questions above.



**Q.22**

Please enter your student number so I can collate your responses with the responses from the previous surveys.

**Q.23**

Since Sept 2012, has your coursework emphasised memorising facts, ideas or methods from your modules so that you can repeat them in the same form?

- ☐ Very Much
- ☐ Quite a bit
- ☐ Some
- ☐ Very Little

**Q.24**

Since Sept 2012, has your coursework emphasised analysing the basic elements of an idea, experience or theory such as examining a particular case study or practical situation in depth and considering its components?

- ☐ Very Much
- ☐ Quite a bit
- ☐ Some
- ☐ Very Little

**Q.25**

Since Sept 2012, has your coursework emphasised synthesising and organising ideas, information or experiences into new, more complex interpretations and relationships?

- ☐ Very Much
- ☐ Quite a bit
- ☐ Some
- ☐ Very Little

**Q.26**

Since Sept 2012, has your coursework emphasised making judgements about the value / quality of information, arguments or methods, used by others and assessed the soundness of their conclusions?

- ☐ Very Much
- ☐ Quite a bit
- ☐ Some
- ☐ Very Little

**Q.27**

Since Sept 2012, has your coursework emphasised applying theories or concepts to practical problems or in new situations?

- ☐ Very Much
- ☐ Quite a bit
- ☐ Some
- ☐ Very little

**Q.28**

Since Sept 2012, how many recommended textbooks or books have you read?

- ☐ None
- ☐ One to Four
- ☐ Five to Ten
- ☐ Eleven to Twenty
- ☐ More than Twenty

**Q.29**

Since Sept 2012, how many books have you read on your own (not assigned / recommended) for personal enjoyment or academic enrichment?

- ☐ None
- ☐ One to Four
- ☐ Five to Ten
- ☐ Eleven to Twenty
- ☐ More than Twenty

**Q.30**

Since Sept 2012, how many written reports or academic papers of 20 pages or more have you read?

- ☐ None
- ☐ One to Four
- ☐ Five to Ten
- ☐ Eleven to Twenty
- ☐ More than Twenty

**Q.31**

Since Sept 2012, how many written reports or academic papers of between 5 and 19 pages have you read?

- ☐ None
- ☐ One to Four
- ☐ Five to Ten
- ☐ Eleven to Twenty
- ☐ More than Twenty

**Q.32**

Since Sept 2012, how many written reports or academic papers of fewer than 5 pages have you read?

- ☐ None
- ☐ One to Four
- ☐ Five to Ten
- ☐ Eleven to Twenty
- ☐ More than Twenty

**Q.33**

Since Sept 2012, in a typical week, how many homework problem sets do you complete that take more than an hour to compete?

- ☐ None
- ☐ One to Two
- ☐ Three to Four
- ☐ Five to Six
- ☐ More than Six

**Q.34**

Since Sept 2012, in a typical week, how many homework problem sets do you complete that take less than an hour to compete?

- ☐ None
- ☐ One to Two
- ☐ Three to Four
- ☐ Five to Six
- ☐ More than Six



**Q.35**

Select the box that best represents the extent to which your assessments / examinations during the current school year have challenged you to do your best work?

- ☐ 1 - Very Little
- ☐ 2
- ☐ 3
- ☐ 4
- ☐ 5
- ☐ 6
- ☐ 7 - Very Much

**Q.36**

Since Sept 2012, how often have you attended an art exhibition, play, dance, music, theatre or other performance?

- ☐ Very Often
- ☐ Often
- ☐ Sometimes
- ☐ Never

**Q.37**

Since Sept 2012, how often have you exercised or participated in physical fitness activities?

- ☐ Very Often
- ☐ Often
- ☐ Sometimes
- ☐ Never

**Q.38**

Since Sept 2012, how often have you participated in activities to enhance your spirituality (worship, meditation, prayer etc.)?

- ☐ Very Often
- ☐ Often
- ☐ Sometimes
- ☐ Never

**Q.39**

Since sept 2012, how often have you examined the strengths and weaknesses of your own views on a topic or issue?

- ☐ Very Often
- ☐ Often
- ☐ Sometimes
- ☐ Never

**Q.40**

Since Sept 2012, how often have you tried to better understand soemone else's view by imagining how an issue looks from their perspective?

- ☐ Very Often
- ☐ Often
- ☐ Sometimes
- ☐ Never

**Q.41**

Since Sept 2012, how often have you learned something that changed the way you understand an issue or concept?

- ☐ Very Often
- ☐ Often
- ☐ Sometimes
- ☐ Never

### Q.42

- Which of the following do you plan to have done before you graduate from ITS?

	Done	Plan to Do	Do Not Plan to Do	Have not Decided
Work Placement	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Volunteer Work	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Research Project	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Study Abroad	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

### Q.43

- Tick the box that best represents the quality of your relationship with people at ITS.

	1 - Unsupportive	2	3	4	5	6	7 Supportive
Other Students	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Lecturers	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
School Based Administrators	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Centrally based Administrators	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Library Staff	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

### Q.44

About how many hours in a typical 7-day week do you spend :-

	0 Hours	1-5 Hours	6-10 Hours	11-15 Hours	16-20 Hours	21-25 Hours	26-30 Hours	More than 30 Hours	More than 30 Hours
Preparing for class	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Working for pay	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Clubs and Societies	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Relaxing and Socialising	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Providing care for dependants	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Commuting to class	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Attending class	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

### Q.45

To what extent does ITS emphasise spending significant amounts of time studying and on academic work?

- ☐ Very Much
- ☐ Quite a Bit
- ☐ Some
- ☐ Never

**Q.46**

To what extent does ITS emphasise providing the support you need to help you to succeed academically?

- ☐ Very Much
- ☐ Quite a Bit
- ☐ Some
- ☐ Never

**Q.47**

To what extent does ITS encourage contact amongst students from different economic, social, racial or ethnic backgrounds?

- ☐ Very Much
- ☐ Quite a bit
- ☐ Some
- ☐ Never

**Q.48**

To what extent does ITS provide support to help you cope with your non-academic responsibilities (Work, Family etc.)?

- ☐ Very Much
- ☐ Quite a bit
- ☐ Some
- ☐ Never

**Q.49**

To what extent does ITS provide the support you need to thrive socially?

- ☐ Very Much
- ☐ Quite a bit
- ☐ Some
- ☐ Never

**Q.50**

To what extent does ITS encourage you to use computers in academic work?

- ☐ Very Much
- ☐ Quite a bit
- ☐ Some
- ☐ Never

**Q.51**

To what extent has your experience of ITS contributed to your knowledge, skills, and personal development in the following areas?

	Very Much	Quite a bit	Some	Very Little
Broad general education	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Work based skills	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Writing effectively	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Speaking effectively	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Thinking analytically	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Using computers	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Developing code of ethics	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Working with others	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Learning on your own	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Understanding yourself	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Solving complex problems	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

**Q.52**

Overall how would you evaluate the quality of advice received from academic staff?

- ☐ Excellent
- ☐ Good
- ☐ Fair
- ☐ Poor

Please help us understand why you selected this answer

### Q.53

How would you evaluate the entire academic experience at ITS?

- ☐ Excellent
- ☐ Good
- ☐ Fair
- ☐ Poor

Please help us understand why you selected this answer

### Q.54

If you could start over again, would you go to the ITS?

- ☐ Definitely yes
- ☐ Probably yes
- ☐ Probably no
- ☐ Definitely no

Please help us understand why you selected this answer

### Q.55

Are you an international student or foreign national?

- ☐ Yes

- ☐ No

**Q.56**

Did you begin college in ITS

- ☐ Yes - I have been in ITS since first year.
- ☐ No - I transferred from another Irish institute.
- ☐ No - I transferred from another foreign institute.

**Q.57**

Are you a member of a sports or social club?

- ☐ No - I am not a member of any sports or social club.
- ☐ Yes - I am a member of one sports or social club
- ☐ Yes - I am a member of more than one sports or social club

**Q.58**

Have you ever received a sports scholarship in ITS?

- ☐ Yes
- ☐ No

**Q.59**

What have most of your grades been up to now in ITS?

- 

**Q.60**

Which department are you a student in?

- 

**Q.61**

Please input the name of the course that you are currently studying. \*

**Q.62**

What is the highest level of education that your Father completed?

- ☐ Did not finish secondary school
- ☐ Finished secondary school
- ☐ Did not finish third level
- ☐ Trade / Apprenticeship
- ☐ Higher / National Certificate (Level 6)
- ☐ Diploma / Degree (Level 7)
- ☐ Degree / Honours Degree (Level 8)
- ☐ Masters - Post graduate qualification (Level 9)
- ☐ Doctoral - Post Graduate Qualification (Level 10)
- ☐ Don't Know

**Q.63**

What is the highest level of education that your Mother completed?

- ☐ Did not finish secondary school
- ☐ Finished secondary school
- ☐ Did not finish third level
- ☐ Trade / Apprenticeship
- ☐ Higher / National Certificate (Level 6)
- ☐ Diploma / Degree (Level 7)
- ☐ Degree / Honours Degree (Level 8)
- ☐ Masters - Post graduate qualification (Level 9)
- ☐ Doctoral - Post Graduate Qualification (Level 10)
- ☐ Don't Know



**Q.64**

Which of the following best describes where you are living while attending college?

- ☐ Student accommodation / village.
- ☐ Rented house / apartment.
- ☐ Live walking / cycling distance from ITS.
- ☐ Live driving distance from ITS.
- ☐ Accommodation with some meals provided.

Many thanks for taking the time to complete this survey, it is much appreciated.

Many Thanks

Michael Barrett.

## **APPENDIX TWO: FOCUS GROUPS DISCUSSION GUIDE**

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### **The college experience and the impact on student retention: A study in the Institute of Technology, Sligo – Student Focus Group Discussion Guide**

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#### **Introduction**

Welcome, this group discussion is to learn how you think and feel about your experience as a student, student retention and other related issues. We appreciate your willingness to participate!

- Remember, there are no right or wrong answers; we want to hear your unbiased opinions!
- The moderator is independent of the discussion.
- Everyone should participate; no one should dominate the conversation.
- Recording is taking place and notes are being taken so we don't miss anything you say.
- Let us know if you need to excuse yourself by leaving the focus group early.
- If you are uncomfortable at any stage you have the right to leave.

#### **Warm Up**

Please introduce yourselves

- Name
- Course
- Where are you from
- What kind of working environment do you see yourself in? (Career Aspirations)

#### **Introductory Questions**

- Why did you decide on your course?
- What were your influencers in coming to ITS and Studying Computing,
- Why did you decide on ITS?

#### **Objective 1: When you started in college**

- When you arrived in ITS what were your first impressions?
  - Of the college
  - Of Staff
  - Of other students
  - Your sense of belonging.
- Did anything change your first impressions?
  - What
  - For the better or worse.

### **Objective 2: Student Engagement**

- Interaction with staff
  - Do you interact with academic staff?
  - Do you interact with non-academic staff?
- Interaction with library
  - Do you use the library?
  - Do you use the services of a librarian?
  - Would you borrow books regularly?
- Did you find the teaching style generally appropriate
  - Comment on your answer.

### **Objective 3: How did you feel personally about your college experience?**

*Consider when you first came to the college and your experiences.*

- Did you experience:-
  - Loneliness
  - Lack of confidence
  - Inability (skills) to study
  - Lack of skills in any area that impacted on your studies?
  - Anxiety about exams / college / personal situation.
- Did you struggle with:-
  - Attendance / vocabulary / homework
  - Assignments – Individual and Group work.

### **Objective 4: What could the college have done to make your experience better?**

*When you came to the college and for the first couple of months is there action the college could have taken to make things better for you.*

- Supports provided by the college.
  - Did you use supports
  - Did they help
  - Would you change anything?
- Anything the college could have done prior to joining?

### **Objective 5: Facilities you would change.**

*Considering your experience now:-*

- What new facilities would you like to see in the Institute?
- What changes would you like to the college environment
- Where do you like to go for study
  - Alone
  - Group work
- Where do you normally study outside college?

**Objective 6: Your motivation to complete the course.**

*Considering your experience now:-*

- Issues that impact positively or negatively on motivation?
- Consider the Institute and its staff and your motivation to succeed:-
  - What do we do well
  - What could we do better
  - Were your expectations met
  - Were your expectations exceeded

**End of group discussion:**

- Any issues pending?
- Anything not said during the group that you think should be addressed?

We very much appreciate your willingness to help! Thank you very much!

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**Probe Questions:**

- Why?
- Can you elaborate?
- How did that make you feel?
- Tell me more about it.

**Rein Them In:**

- Thanks for that comments; it was very interesting, but let's see what the others have to say.
- That's interesting, but let's try to stay on track

End of Thesis